Infectious Diseases

ELISAS

CMV Buccal Swab

Fasciola

Dengue

TORCH

DRG®

A BioCheck COMPANY

DRG Diagnostics

More than 50 Years of Innovative Diagnostics

The DRG Group is a leading manufacturer of immunoassay test systems for clinical diagnostics and research with distribution partners in over 120 countries. DRG is also the manufacturer of the **DRG:HYBRiD-XL®**, a fully automated analyzer for immunoassays and clinical chemistry. Founded in 1970, DRG International, Inc. provides a complete range of products and services to the diagnostic and research communities. DRG International's headquarters is conveniently situated in Springfield, New Jersey, USA.

DRG Instruments, Marburg
The German division, DRG Instruments GmbH, was established in 1973 and is located in Marburg. Since 1990, DRG Instruments develops and manufactures innovative immunoassays, both for routine and research applications. With the expansion of DRG in the early nineties, further subsidiaries were founded in Poland, Russia, Czech Republic. DRG is an ISO 13485 certified company and operates in accordance the FDA 21 CFR 820 Quality System Regulation.

Mehr als 50 Jahre Innovative Diagnostik

Die DRG Gruppe ist ein führender Hersteller von Immunoassay-Testsystemen für die klinische Diagnostik und Forschung mit Vertriebspartnern in über 120 Ländern. DRG ist auch der Hersteller des **DRG:HYBRiD-XL®**, einem vollautomatischen Analysegerät für Immunoassays und klinische Chemie.
DRG International, Inc. wurde 1970 gegründet und bietet ein umfassendes Angebot an Produkten und Dienstleistungen für die Diagnostik- und Forschungsgemeinschaft. Der Hauptsitz von DRG International befindet sich in Springfield, New Jersey, USA.

DRG Instruments, Marburg
Die deutsche Niederlassung, DRG Instruments GmbH, wurde 1973 gegründet und hat ihren Sitz in Marburg. Seit 1990 entwickelt und produziert DRG Instruments innovative Immunoassays, sowohl für Routine- als auch für Forschungsanwendungen. Mit der Expansion der DRG in den frühen neunziger Jahren wurden weitere Tochtergesellschaften in Polen, Russland und der Tschechischen Republik gegründet. DRG ist ein nach ISO 13485 zertifiziertes Unternehmen und arbeitet in Übereinstimmung mit der FDA 21 CFR 820 Quality System Regulation.

BioCheck

BioCheck acquired DRG International
BioCheck, Inc., the parent company of DRG, is located in California, USA and was founded in April 1997. BioCheck acquired DRG International with all offices in August 2021.

BioCheck designs, develops, and manufactures high-quality in vitro diagnostic immunoassay devices for the worldwide biomedical, pharmaceutical, and scientific research markets. BioCheck is an ISO 13485 certified and U.S. FDA 21 CFR Part 820 compliant company that provides quality products and is committed to best-in-class customer care.

Together with the DRG subsidiaries, BioCheck's goal is to provide timely results and information so treatment can be implemented earlier, and effectiveness can be analyzed sooner to improve patient well-being through sustainable results.

BioCheck

BioCheck erwirbt DRG International
BioCheck, Inc. ist die Muttergesellschaft von DRG mit Sitz in Kalifornien, USA, und wurde im April 1997 gegründet. BioCheck hat DRG International mit allen Niederlassungen im August 2021 übernommen.

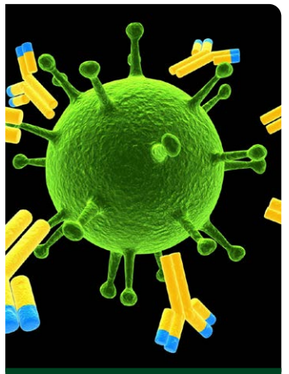
BioCheck entwirft, entwickelt und produziert hochwertige In-vitro-Diagnostik-Immunoassay-Geräte für die weltweiten biomedizinischen, pharmazeutischen und wissenschaftlichen Forschungsmärkte. BioCheck ist ein nach ISO 13485 und U.S. FDA 21 CFR Part 820 zertifiziertes Unternehmen, das Qualitätsprodukte anbietet und sich für eine erstklassige Kundenbetreuung einsetzt.

Zusammen mit den DRG-Niederlassungen ist es das Ziel von BioCheck, rasche Ergebnisse und Informationen zu liefern, damit Behandlungen früher eingeleitet und die Wirksamkeit früher analysiert werden kann, um durch nachhaltige Ergebnisse das Patientenwohl zu verbessern.

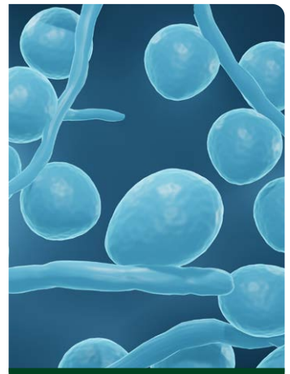
Infectious Diseases ELISAS – Content

PARASITES (P) PAGE

BACTERIA (B) PAGE



VIRUS (V) PAGE



FUNGI (F) PAGE

Infectious Diseases ELISAS

ADENOVIRUS V

Adenoviruses are double-stranded DNA viruses of about 60-90 nm lacking an envelope. The capsid contains 252 capsomeres and shows icosahedral symmetry. The capsomeres consist of hexons, pentons, and fibers (so named after their configuration) which are responsible for the induction of group- and type-specific antibodies. 34 immunologically distinct types (serotypes) are recognized in man. Adenoviruses were first isolated from adenoid tissue and have certain affinity for lymph glands, where they may remain latent for years. They also invade the respiratory tract, the gastrointestinal tract, and the conjunctiva. Adenovirus infections are widely distributed and common with most infections occuring in childhood. The contagious disease normally is acute and self-limited, but infections may be prolonged and asymptomatic, possibly remaining latent for a very long time. Seasons for highest rates of general adenovirus infections are winter and spring, independent of geographic locations and climatic conditions. Epidemics may occur in populations crowded together, for example ARD in military groups, PCF in swimming pools, and EKC in medical facilities.

Product	Cat.No.	Incubation	Testprinciple (Qualitative/ Quantitative)	Standard Range	Sample Volume	Sample Dilution	Specials
Adenovirus IgA ELISA	EIA-3445	60/30/15	Qualitative		Serum/ Plasma 10 µl	1:101	*
Adenovirus IgG ELISA	EIA-3446	60/30/15	Qualitative		Serum/ Plasma 10 µl	1:1001	*
Adenovirus IgM ELISA	EIA-3447	60/30/ 15	Qualitative		Serum/ Plasma 10 µl	1:101	*

* Adenovirus Grade 2 antigen (strain Adenoid 6)

ASCARIS LUMBRICOIDES P

Ascariasis is an infection caused by a parasitic roundworm, Ascaris lumbricoides. This is the most common intestinal worm infection. It is found in association with poor personal hygiene, poor sanitation, and in places where human feces are used as fertilizer. Intake of food or drink contaminated with roundworm eggs causes infection. The eggs hatch and release larvae within the intestine. The larvae then move through the bloodstream to the lungs, exit up through the large airways of the lungs, and are swallowed back into the stomach and intestines. During movement through the lungs the larvae may produce an uncommon form of pneumonia called eosinophilic pneumonia. Once back in the intestines, they mature into adult roundworms. Adult worms live in the intestine where they lay eggs that are present in feces.

Product	Cat.No.	Incubation	Testprinciple (Qualitative/ Quantitative)	Standard Range	Sample Volume	Sample Dilution	Specials
Ascaris lumbricoides IgG ELISA	EIA-3817	60/30/15	Qualitative		Serum/ Plasma 10 µl	1:101	

ASPERGILLUS FUMIGATUS F

The most common pathogen of the genus Aspergillus is A. fumingatus, occuring in hay, grain, rotten plants and bird faeces. The main opportunistic invasive fungal infections are the candidal mycosis followed by aspergillosis. In general, infections with Aspergillus spp. are airborne. Because of the ubiquity of Aspergillus species, it is difficult to decide between contamination by commensalism or a serious infection. Usually infection in humans occurs in already damaged tissues only. Aspergillus spp. can cause a chronic infection of paranasal sinus, eyes or lungs. Three types of lung-aspergillosis can be distinguished: acute infection (bronchial pneumonia; pneumonia), saprophytic aspergillom (compact reticulum of hyphae in the lungs) and allergic bronchopulmonal aspergillosis (mediated by IgE).

Product	Cat.No.	Incubation	Testprinciple (Qualitative/ Quantitative)	Standard Range	Sample Volume	Sample Dilution	Specials
Aspergillus fumigatus IgG ELISA	EIA-6129	60/30/15	Qualitative		Serum/ Plasma 10 µl	1:101	
Aspergillus fumigatus IgM ELISA	EIA-6130	60/30/15	Qualitative		Serum/ Plasma 10 µl	1:101	

BARTONELLA B

Bartonella henselae is a fastidious and slow growing gram negative bacterium causing cat scratch disease (CSD) in immunocompetent patients or bacillary angiomatosis in immunosuppressed patients. This zoonotic pathogen is distributed worldwide. The predominant symptom of cat scratch disease is a regional lymphadenopathy, which develops 2-3 weeks after exposure (with a range of 7-50 days). Characteristically, the affected lymph node is tender and clearly swollen. Affected lymph nodes are most frequently the axillary and epitrochlear nodes (46 %), nodes in head and neck (26 %) and at the groin (17.5 %). In 15 % of the cases, the lymph node also suppurates. 30 % of patients suffer from mild fever below 39°C. B. henselae is the third most infectious cause of fever of unknown origin. Further accompanying effects are myalgia, malaise, and fatigue. Perinodal forms of bartonellosis may lead to endocaditis. In immunocompromised patients, infections with B. henselae can lead to bacillary angiomatosis.

Product	Cat.No.	Incubation	Testprinciple (Qualitative/ Quantitative)	Standard Range	Sample Volume	Sample Dilution	Specials
Bartonella Ab ELISA	EIA-6119	60/30/15	Qualitative		Serum/ Plasma 10 µl	1:101	

BORDETELLA PERTUSSIS B

Bordetella species are non-spore-forming encapsulated bipolar, coccoid (pale-staining) Gram-negative bacilli (about 0.3-0.5 µm thick and 1 µm long). The genus consists of the human parasites B. pertussis and B. parapertussis, and B. bronchiseptica which causes enzootic infections in various wild and domestic animal species. Bordetella pertussis produces a single disease syndrome in man known as pertussis or whooping cough. It is a highly contagious childhood disease (app. 80% of cases occur before the age of 5 years) which is transmitted by respiratory contact and is associated with a high mortality rate (about 1-2% in the first year of life, later on about 0.1 %). In the absence of immunization, essentially no one escapes pertussis. Clinical pertussis is followed by natural acquired immunity, which is long-lasting but not permanent. The distribution of the disease is worldwide, though clearly modified by immunization and other poorly defined social, economic, and nutritional factors. In most countries an active vaccination is recommended. Usually the immunization preparation is combined with diphtheria and tetanus toxoids.

Product	Cat.No.	Incubation	Testprinciple (Qualitative/ Quantitative)	Standard Range	Sample Volume	Sample Dilution	Specials
Bordetella pertussis/ toxin IgA ELISA	EIA-3449	60/30/15	Qualitative		Serum/ Plasma 10 µl	1:101	
Bordetella pertussis/ toxin IgG ELISA	EIA-3450	60/30/15	Qualitative		Serum/ Plasma 10 µl	1:101	
Bordetella pertussis/ toxin IgM ELISA	EIA-3451	60/30/15	Qualitative		Serum/ Plasma 10 µl	1:101	
Bordetella pertussis Toxin (PT) IgA ELISA	EIA-6132	60/30/15	Quantitative	0-50 IU/ ml	Serum/ Plasma 10 µl	1:101	
Bordetella pertussis Toxin (PT) IgG ELISA	EIA-6133	60/30/15	Quantitative	0-50 IU/ ml	Serum/ Plasma 10 µl	1:101	

BORRELIA BURGDORFERI (LYME) B

Borrelia burgdorferi, a bacterium of the Spirochaetaceae, is the ethiologic agent of Lyme disease (Borreliosis) being the most common disease in Europe and the USA transmitted by tics (Ixodes sp.). Lyme borreliosis is a multi-systemic disease with a broad spectrum of clinical symptoms. A typical symptom of the acute phase is the erythema chronicum migrans (ECM), often accompanied by fluelike symptoms. In later stages of the disease arthritis, carditis, as well as neurological and dermatological manifestations may occur. Lyme borreliosis can be treated with antibiotics in all stages. Therefore, a safe and sensitive laboratory diagnosis of Lyme borreliosis, also detecting the early stage of diseases, is of major importance, since an early treatment is most appreciated. IgM antibodies usually appear approximately three weeks after the infection, IgG antibodies after four to six weeks. The early immune reaction is mainly directed against the flagellin peptide (41 kDa) and the OspC (Outer surface protein C, 23 kDa) and is then spread on more and more bacterial proteins. Usually the acute phase is indicated by high titers of IgM antibodies. Elevated IgG titers with low or without IgM antibodies may occur when the borreliosis is subsiding (due to therapy or spontaneously) or during the chronic stage. The performance of the Borrelia IgG ELISA is important especially to detect a borreliosis even in cases showing negative 14 kDa + OspC titers and to monitor the immune status. The Borrelia IgG ELISA employs the very highly specific recombinant Borrelia burgdorferi VlsE antigen and a highly specific crude lysate antigen blend from Borrelia burgdorferi sensu strictu, B. afzelii and B. garinii and therefore determines IgG antibodies with extremely high sensitivity and specificity.

Product	Cat.No.	Incubation	Testprinciple (Qualitative/ Quantitative)	Standard Range	Sample Volume	Sample Dilution	Specials
Borrelia IgG + VIsE ELISA	EIA-4289	60/30/30	Quantitative	2-200 U/ml	Serum/ Plasma/ CSF 10µl/50µl	1:101 1:4	
Borrelia 14kDa + OspC IgM ELISA	EIA-4288	60/30/30	Quantitative	2-200 U/ml	Serum/ Plasma/ CSF 10µl/50µl	1:101 1:4	
Borrelia burgdorferi IgG ELISA	EIA-3806	60/30/15	Qualitative		Serum/ Plasma/ CSF 10 µl /100 µl	1:101 1:4	
Borrelia burgdorferi IgM ELISA	EIA-3803	60/30/15	Qualitative		Serum/ Plasma/ CSF 10 µl /100 µl	1:101 1:4	
Anti-Borrelia IgG Line Immunoassay	EIA-5300	5/45/45/10	Qualitative		Serum/ Plasma 15 µl		20 tests
Anti-Borrelia IgM Line Immunoassay	EIA-5301	5/45/45/10	Qualitative		Serum/ Plasma 15 µl		20 tests

BRUCELLA B

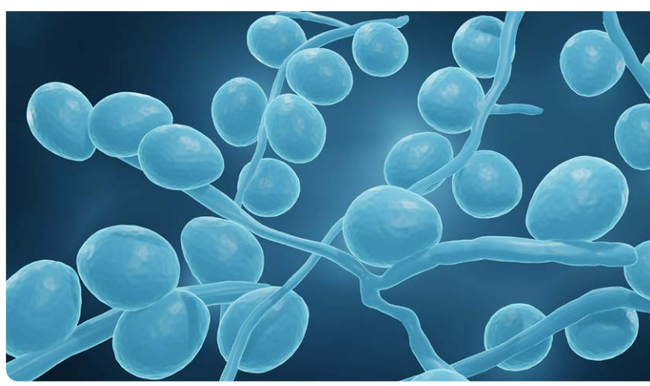
Brucella is a small gram-negative bacterium (0.4-0.8 µm in diameter and 0.4-3.0 µm in length) which is non-flagellated, and non-spore-forming. Since the discovery of Brucella melitensis by Bruce in 1887, an increasingly complex pattern of strains has emerged, and each type has distinctive epidemiological features. Virulent Brucella organisms can infect both nonphagocytic and phagocytic cells; the mechanisms of pathogenesis of Brucellosis in its natural host species and in humans are still not completely understood. Worldwide, brucellosis remains a major source of disease in humans and domesticated animals. Although reported incidence and prevalence of the disease vary widely from country to country (from <0.01 to >200 per 100,000 population), bovine brucellosis caused mainly by B. abortus is still the most widespread form. Risk groups include abattoir workers, meat inspectors, animal handlers, veterinarians, and laboratorians. Brucellosis is a nationally notifiable disease and reportable to the local health authority.

Product	Cat.No.	Incubation	Testprinciple (Qualitative/ Quantitative)	Standard Range	Sample Volume	Sample Dilution	Specials
Brucella IgG ELISA	EIA-3455	60/30/15	Qualitative		Serum/ Plasma 10 µl	1:101	
Brucella IgM ELISA	EIA-3456	60/30/15	Qualitative		Serum/ Plasma 10 µl	1:101	

CANDIDA ALBICANS F

Species of Candida are non-mycelia-producing non-ascospore-forming yeastlike fungi which appear as small (4-6 µm), oval, thin-walled gram-positive budding cells. The most important representative, Candida albicans, is a facultative pathogen for man. C. albicans is ubiquitous and commonly found as transient flora on normal mucous membranes. Although not pathogenic in healthy humans the fungus may be opportunistic in those suffering from a variety of disorders, and in those treated intensively with broad spectrum antibiotics or immunosuppressive measures. Candidiasis is caused to about 90% by C. albicans. It is an acute or subacute infection in which the fungus may produce lesions in the mouth (trush, oral candidiasis), vagina (vulvovaginal candidiasis), skin and nails (intertriginous candidiasis), bronchi or lungs (bronchopulmonary candidiasis) and, occasinally, a septicemia, endocarditis or meningitis. In immunosuppressant patients with cellular immunodeficiency, e.g., AIDS patients, C. albicans may lead to severe necroses of infected tissues.

Product	Cat.No.	Incubation	Testprinciple (Qualitative/ Quantitative)	Standard Range	Sample Volume	Sample Dilution	Specials
Candida albicans IgA ELISA	EIA-3457	60/30/15	Qualitative		Serum 10 µl	1:101	
Candida albicans IgG ELISA	EIA-3458	60/30/15	Qualitative		Serum 5 µl	1:1001	
Candida albicans IgM ELISA	EIA-3459	60/30/15	Qualitative		Serum 10 µl	1:101	



Infectious Diseases ELISAS

CHIKUNGUNYA V

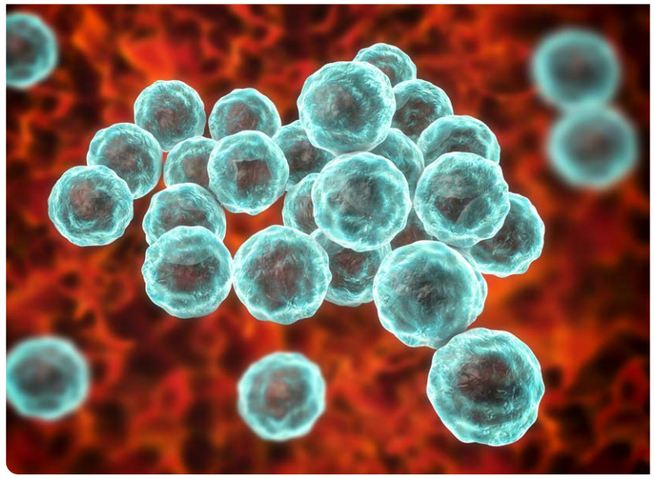
Chikungunya virus is an arthropod borne virus of the genus Alphavirus (family Togaviridae). The Alphavirus genus contains at least 24 distinct species. These are lipid-enveloped virions with a diameter of 50 to 60 nm. Alphavirus infections are initiated by the bite of an infected mosquito, which results in the deposition of virus in subcutaneous and possibly cutaneous tissues. After an incubation period of 1 to 12 days the Chikungunya fever develops.
Chikungunya fever (Chikungunya means “that which bends up”, in reference to the crippling manifestations of the disease) is an acute viral infection characterized by a rapid transition from a state of good health to illness that includes severe arthralgia and fever. Temperature rises abruptly to as high as 40°C and is often accompanied by shaking chills. After a few days, fever may abate and recrudesce, giving rise to a “saddleback” fever curve. Arthralgia is polyarticular, favoring the small joints and sites of previous injuries, and is most intense on arising. Patients typically avoid movement as much as possible. Joints may swell without significant fluid accumulations. These symptoms may last from 1 week to several months and are accompanied by myalgia. The rash characteristically appears on the first day of illness, but onset may be delayed. It usually arises as a flush over the face and neck, which evolves to a maculopapular or macular form that may be pruritic. The latter lesions appear on the trunk, limbs, face, plams and soles, in that order of frequency. Petechial skin lesions have also been noted. Headache, photophobia, retro-orbitral pain, sore throat with objective signs of pharyngitis, nausea and vomiting also occur in this setting. Occasionally, however persistent arthralgia and polyarthritis (lasting months or even years) do occur, sometimes involving joint destruction. Even rarer, sequelae include encephalitis and meningoencephalitis with high lethality rates.
The virus has major importance in Africa and Asia. From 20% to more than 90% of the population of tropical and subtropical show serologic evidence of infection. Because Aedes mosquitoes are increasingly prevalent in North Africa and South America, where the population would be uniformly susceptible to infection, the possibility for epidemics is evident. Chikungunya virus infections are imported to central Europe mainly by travellers to tropical and subtropical countries.

Product	Cat.No.	Incubation	Testprinciple (Qualitative/ Quantitative)	Standard Range	Sample Volume	Sample Dilution	Specials
Chikungunya IgG ELISA	EIA-5102	60/30/ /30/30/15	Qualitative		Serum/ Plasma 10 µl	1:101	
Chikungunya IgM ELISA	EIA-5103	60/30/ /30/30/15	Qualitative		Serum/ Plasma 10 µl	1:101	

CHLAMYDIA B

Chlamydiae are no motile, Gram negative and obligatory intracellular growing bacteria, which form characteristic inclusions within the cytoplasm of parasitized cells. They are easily visible in the light microscope. Three different Chlamydia species pathogenic for humans are known: Chlamydia trachomatis, Chlamydia pneumoniae and Chlamydia psittaci, and one species only pathogenic for animals (C.pecorum).
Chlamydia trachomatis is the most prevalent agent of sexually transmitted diseases worldwide (400-500 million cases) and the number of infections is constantly growing. Rates in sexually active young people are commonly between 5% and 10% in Europe. In women, Chlamydia trachomatis can lead to pelvic inflammatory disease (PID), tubal infertility and ectopic pregnancy. Infection during pregnancy is associated with premature rupture of the membranes, low birth weight and miscarriage. Chlamydia trachomatis, can also be transmitted from mother to baby during labour, causing eye and respiratory infections. In men, Chlamydia trachomatis can lead to acute genital inflammation (epididymitis, epididymo-orchitis) and occasionally to sexually-acquired reactive arthritis (SARA). In men and women Chlamydia trachomatis may produce proctitis. Individuals with Chlamydia trachomatis are at increased risk of acquiring or transmitting HIV. Extraarticular infection with Chlamydia trachomatis caused an inflammatory reactive arthritis (Chlamydia-induced arthritis (CIA)). A severe problem in Chlamydia infections is the frequent asymptomatic insidious course, which may result in the initiation of chronic diseases. In many instances, primary infections are not recognized and only the sequelae caused by ascended, persisting agents are diagnosed. After primary infection, IgM, IgA, and IgG antibodies can be detected successively in serum samples. IgG antibodies are generally considered as markers for any contact with the pathogen irrespective of disease stage. IgM antibodies are characteristic for acute infection and IgA antibodies indicate ongoing progression of an infection.
C. pneumoniae causes respiratory disease (e.g. pneumonia, bronchitis) and is suspected of causing endocarditis, coronary heart diseases.

Product	Cat.No.	Incubation	Testprinciple (Qualitative/ Quantitative)	Standard Range	Sample Volume	Sample Dilution	Specials
Chlamydia pneumoniae IgA ELISA	EIA-4160	60/30/15	Qualitative		Serum/ Plasma 10 µl	1:101	
Chlamydia pneumoniae IgG ELISA	EIA-3912	60/30/15	Qualitative		Serum/ Plasma 10 µl	1:101	
Chlamydia pneumoniae IgM ELISA	EIA-3913	60/30/15	Qualitative		Serum/ Plasma 10 µl	1:101	
Chlamydia Antigen ELISA	EIA-3460	10/60/20	Qualitative		Endocer-vical and Urethral speci-mens 25 ml		Swabs, Transport medium available separately
Chlamydia trachomatis IgA ELISA	EIA-3461	60/30/15	Qualitative		Serum/ Plasma 10 µl	1:101	
Chlamydia trachomatis IgG ELISA	EIA-3462	60/30/15	Qualitative		Serum/ Plasma 10 µl	1:101	
Chlamydia trachomatis IgM ELISA	EIA-3463	60/30/15	Qualitative		Serum/ Plasma 10 µl	1:101	



CORYNEBACTERIUM DIPHTERIAE B

Diphtheria is an acute communicable disease, caused by Corynebacterium diphtheriae. The signs and symptoms of infection are a pharyngeal membrane, sore throat, dysphasia, malaise, headache, and nausea. Death may result from respiratory obstruction by the membrane or myocarditis from the toxin. Although diphtheria is still a serious problem in many underdeveloped countries, active immunizations in many developed countries have helped to decrease the number of reported cases of diphtheria infection. Recent epidemics in Eastern Europe and Russia, combined with low levels of protective diphtheria antitoxin (DAT) in adult populations, have caused concern that outbreaks of diphtheria could occur in developed countries. A study in northern Europe reported findings of 26% of the surveyed population being below the minimum protective level of 0.01 IU/ml.

Product	Cat.No.	Incubation	Testprinciple (Qualitative/ Quantitative)	Standard Range	Sample Volume	Sample Dilution	Specials
Coryne-bacterium diphtheriae toxin IgG ELISA	EIA-3824	60/30/15	Quantitative	0-1000 IU/ml	Serum/ Plasma 10 µl	1:101	

COXIELLA BURNETII B

Q-Fever is a disease that results from infection with small, polymorph and gram-negative bacteria called Coxiella burnetii. After an outbreak in Brisbane, Australia, the responsible organism was isolated and named Coxiella burnetii in honour of Dr Herald Rae Cox and Sir Frank Burnet. New molecular research demonstrated a close relationship to Legionella. The zoonosis Q-Fever is found everywhere except New Zealand (no data available). There is an extensive reservoir (mainly ticks) of C. burnetii. Ticks are an important vector of the pathogen in the transmission between domestic and wildlife animals. But the ticks are unimportant in the direct infection of humans. Cattles, sheep and goats are usually the source of transmission of this microorganism to humans. However cats, dogs and rabbits are also important in this regard. In most instances humans become infected with Coxiella burnetii following inhalation of contaminated aerosols (respiratory tract). The incubation period for Q-Fever in humans is about 2 weeks. The resulting illness can be divided into acute and chronic varieties. During the acute phase of illness antibodies to the phase 2-antigen are formed. Anti phase-1 antibodies in high titers are typical for a chronic disease. In areas where Q-Fever is endemic, 12% or more of the population have antibodies to C. burnetii. Most of the infections are subclinical or undiagnosed. The acute infection shows symptoms of high fever, shivers, muscle pain and headache. Later on more severe diseases such as pneumonia or hepatitis can occur. Infections during pregnancy can lead to an abort or premature birth. Approximately 1% of all infections become chronic. The most frequent organ manifestation in Q-Fever is endocarditis.

Product	Cat.No.	Incubation	Testprinciple (Qualitative/ Quantitative)	Standard Range	Sample Volume	Sample Dilution	Specials
Coxiella burnetti (Q-Fever) Phase 1 IgG ELISA	EIA-5188	60/30/15	Qualitative		Serum/ Plasma 10 µl	1:101	
Coxiella burnetti (Q-Fever) Phase 2 IgG ELISA	EIA-5189	60/30/15	Qualitative		Serum/ Plasma 10 µl	1:101	
Coxiella burnetti (Q-Fever) Phase 2 IgM ELISA	EIA-5187	60/30/15	Qualitative		Serum/ Plasma 10 µl	1:101	

COXSACKIEVIRUS V

Coxsackie virus belongs to a group of viruses called enteroviruses in particular they are Picornaviruses. They are present in two main groups, A and B. Most Coxsackie virus infections are not serious. They typically cause only mild signs and symptoms, such as fever, rash, sore throat, joint pain and headache. Symptoms usually last about a week. Coxsackie virus infection occurs most often in young children.
Group A viruses are associated with aseptic meningitis, colds, acute hemorrhagic conjunctivitis and acute myocardiopathies and group B are associated with acute myocarditis and a polio-like paralysis. Syndromes associated particularly with Coxsackie virus B are pleurodynia, also known as Bornholm disease or devil‘s grippe, which presents with severe pleuritic chest pain, sometimes accompanied by abdominal pain and vomiting, aseptic meningitis, colds, and myocardial or pericardial infections. Recently immunochemical techniques have been applied to the early diagnosis of CoxB infection with ELISA tests for IgM, as a serological marker of recent infection.

Product	Cat.No.	Incubation	Testprinciple (Qualitative/ Quantitative)	Standard Range	Sample Volume	Sample Dilution	Specials
Coxsackie B Virus IgG ELISA	EIA-5493	60/60/20	Qualitative		Serum/ Plasma 10 µl	1:101	
Coxsackie B Virus IgM ELISA	EIA-5175	60/60/20	Qualitative		Serum/ Plasma 10 µl	1:101	

CRYPTOSPORIDIUM P

Cryptosporidium is a coccidian parasite that is recognized as an important enteric pathogen. The organism causes an acute, though self-limiting infection in immune competent individuals. Incubation periods of I to 12 days have been reported with most oocyst shedding ending by day 21. Symptoms range from mild to severe diarrhea with a variety of complications. The infection in immunocompromised patients is much more severe and may often be life threatening. Passage of fluid, up to 12 liters per day, has been reported. Multiple pathways of Cryptosporidium transmission have been implicated. These include animal to human, water contamination and person-to-person. The latter may include contact between members of the same household, day care centers, and homosexual men. Diagnosis of Cryptosporidium infections was done originally by direct detection techniques. Of these, microscopic examination of stools using stains or fluorescence labeled antibodies has been the most common. However, this method relies on an experienced technician and subsequent observation of intact organisms. Because of the historically low proficiency of correct microscopic examinations, alternative diagnostic methods have been investigated. One important alternative has been the development of an antigen capture enzyme linked immuno sorbent assay (ELISA) for use with stools. These tests, which have shown comparable sensitivity to experienced microscopic examinations, are fairly simple to perform and do not require the observation of intact organisms.

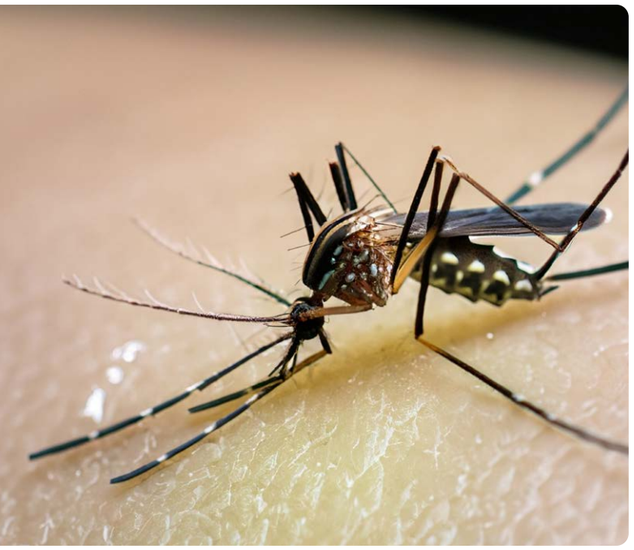
Product	Cat.No.	Incubation	Testprinciple (Qualitative/ Quantitative)	Standard Range	Sample Volume	Sample Dilution	Specials
Cryptospori-dium Antigen (stool) ELISA	EIA-3467	60/30/10	Qualitative		Stool 0,1 g	1:4	

CYTOMEGALOVIRUS (CMV) V

Cytomegalovirus (CMV) is a member of the herpesvirus group (Betasubfamily, DNA virus of 150-200 nm). These viruses share a characteristic ability to remain dormant within the body over a long period. Initial CMV infection, which may have few symptoms, is always followed by a prolonged, inapparent infection during which the virus resides in cells without causing detectable damage or clinical illness. Severe impairment of the body‘s immune system by medication or disease consistently reactivates the virus from the latent or dormant state. CMV is found universally throughout all geographic locations and socioeconomic groups, and infects between 50% and 85% of adults. CMV infection is more widespread in developing countries and in areas of lower socioeconomic conditions. For the vast majority of people, CMV infection is not a serious problem, but it is to certain high-risk groups: the unborn baby during pregnancy, people who work with children, and immunocompromised persons, such as organ transplant recipients and persons infected with HIV. The presence of virus resp. infection may be identified by Microscopy, PCR, Serology: CBR and detection of antibodies by ELISA. IgM antibodies are the first to be produced by the body in response to a CMV infection. They are present in most individuals within a week or two after the initial exposure. IgM antibody production rises for a short time period and then declines. After several months, the level of CMV IgM antibody usually falls below detectable levels. Additional IgM antibodies are produced when latent CMV is reactivated. IgG antibodies are produced by the body several weeks after the initial CMV infection and provide protection from primary infections. Levels of IgG rise during the active infection, then stabilize as the CMV infection resolves and the virus becomes inactive. After a person has been exposed to CMV, he or she will have some measurable amount of CMV IgG antibody in their blood for the rest of their life. CMV IgG antibody testing can be used, along with IgM testing, to help confirm the presence of a recent or previous CMV infection.
An interesting new application for the CMV IgG Buccal Swab ELISA (RUO) is the screening of donors prior to transplantation. CMV infection or reactivation after transplantation has been associated with negative effects on overall survival. As many donor centres have switched to buccal swabs for sample collection, we offer a test to determine CMV status from dried cheek swab samples, eliminating the need for invasive blood collection.

Infectious Diseases ELISAS

Product	Cat.No.	Incubation	Testprinciple (Qualitative/ Quantitative)	Standard Range	Sample Volume	Sample Dilution	Specials
CMV IgG ELISA	EIA-3468	60/30/10	Quantitative	10-80 DU/ml	Serum/ Plasma 10 µl	1:101	
CMV IgM ELISA	EIA-3469	60/30/10	Quantitative	50-400 DU/ml	Serum/ Plasma 10 µl	1:101	
CMV IgG Buccal Swab ELISA (RUO)	SLV-6110	60/30/10	Quantitative	10-80 DU/ml	Buccal swab		Research use only



DENGUE VIRUS V

Dengue virus is a single-stranded RNA virus of about 50 nm in diameter belonging to the genus Flavivirus. Dengue and dengue hemorrhagic fever are caused by one of four closely related, but antigenically distinct, virus serotypes (DENV-1, DENV-2, DENV-3 and DENV-4). Infection with one of these serotypes does not provide cross-protective immunity, so persons living in a dengue-endemic area can have four dengue infections during their lifetimes. The viruses are transmitted by Aedes aegypti, a domestic, diurnal-biting mosquito that prefers to feed on humans. Infection with dengue viruses produces a spectrum of clinical illness ranging from a nonspecific viral syndrome to severe and fatal hemorrhagic disease. It is primarily a disease of the tropics; its global distribution is comparable to that of malaria, and an estimated 2.5 billion people live in areas at risk for epidemic transmission. Globally, there are an estimated 50 to 100 million cases of dengue fever and several hundred thousand cases of dengue hemorrhagic fever. The case-fatality rate of DHF in most countries is about 5%; most fatal cases are among children and young adults. Important risk factors for DHF include the strain and serotype of the infecting virus, as well as the age, immune status, and genetic predisposition of the patient. Risk groups: residents of or visitors to tropical urban areas.

Product	Cat.No.	Incubation	Testprinciple (Qualitative/ Quantitative)	Standard Range	Sample Volume	Sample Dilution	Specials
Dengue Virus IgG ELISA	EIA-3470	60/30/15	Qualitative		Serum/ Plasma 10 µl	1:101	
Dengue Virus IgM ELISA	EIA-3471	60/30/15	Qualitative		Serum/ Plasma 10 µl	1:101	

ECHINOCOCCUS P

Echinococci are microscopic cestodes (tapeworms) with a length of 1.4 to 6 mm, which are dependent on their genus found. E. granulosus, either in dogs or other canids. E. multilocularis, in foxes, coyotes and wolves. Sources of infection are final hosts (i.e. dogs for E. granulosus and mainly foxes for E. multilocularis) and food contaminated with parasite eggs. After ingestion of a suitable intermediate host, the egg hatches in the small bowel and releases an oncosphere that penetrates the intestinal wall and through the circulatory system into various organs where it develops into a cyst. Echinococcus infections remain silent for years before the enlarging cysts cause symptoms in the affected organs. E. granulosus larvae (oncospheres) begin to vesiculate mainly in the liver but also in the lungs and in other organs (20%). The parasites form spherical, unilocular, fluid-filled cysts and can achieve diameters between 1 cm - 15 cm. In contrast to cystic echinococcosis, E. multilocularis larvae are found almost exclusively (98%) in the liver, but secondary lesions can spread metastatically to other organs (lungs, kidneys, CNS and others). The parasites grow infiltrative and tumor-like in the host tissue. E. granulosus occurs practically worldwide E. multilocularis occurs in the northern hemisphere, including central Europe and the northern parts of Europe, Asia, and North America. Detectable immune responses have been associated with the location, integrity, and vitality of the larval cyst. Cysts in the liver are more likely to elicit antibody response than cysts in the lungs, and regardless of localization, antibody detection tests are least sensitive in patients with intact hyaline cysts. Cysts in the lungs, brain, and spleen are associated with lowered serodiagnostic reactivity whereas those in bone appear to more regularly stimulate detectable antibody. Fissuration or rupture of a cyst is followed by an abrupt stimulation of antibodies. A Differentiation between both species of Echinococcus is not possible.

Product	Cat.No.	Incubation	Testprinciple (Qualitative/ Quantitative)	Standard Range	Sample Volume	Sample Dilution	Specials
Echinococcus IgG ELISA	EIA-3472	60/30/15	Qualitative		Serum/ Plasma 10 µl	1:101	

ENTAMOEBA HISTOLYTICA P

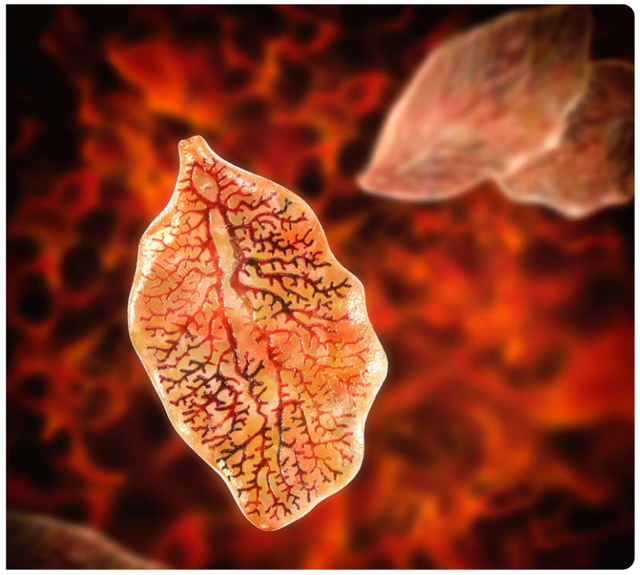
E. histolytica is the protozoan parasite responsible for the disease amebiasis. Symptoms of acute amebiasis include diarrhea and colitis. The disease may manifest itself as an acute, chronic or as an asymptomatic infection. In addition, a percentage of the intestinal amebic infections will become extra-intestinal and cause abscesses in various organs. If extra-intestinal amebiasis is suspected, a serology test should be used for diagnosis. By the time abscesses are occurring, the patient's stools are normally clear of amoebas. The mode of transmission of E. histolytica is typically through fecal-oral ingestion of cysts, often by drinking contaminated water. Epidemics of amebiasis have been documented in developed nations but the parasite is quite common in under-developed countries. Travelers returning from under-developed countries account for the majority of cases in developed countries. Diagnosis of intestinal amebiasis has been done through a number of invasive and non-invasive techniques. Of the non-invasive techniques, microscopic examination of stools has been the most common. However, this method relies on an experienced technician and subsequent observation of intact organisms. Because of the historically low proficiency of correct microscopic examinations and intermittent excretion of organisms, alternative diagnostic methods have been investigated.

Product	Cat.No.	Incubation	Testprinciple (Qualitative/ Quantitative)	Standard Range	Sample Volume	Sample Dilution	Specials
Entamoeba histolytica IgG ELISA	EIA-3830	60/30/15	Qualitative		Serum/ Plasma 10 µl	1:101	
Entamoeba histolytica Ag (stool) ELISA	EIA-3473	30/5/5/5	Qualitative		Stool 1 g	1:4	MOQ 5 kits

EPSTEIN-BARR VIRUS (EBV) V

Infectious mononucleosis is an acute lymphoproliferative disease that is common in children and young adults and is caused by the Epstein-Barr Virus. The EBV is one of the herpes viruses 4 (gamma). Characteristic clinical features include fever, sore throat, and lymphadenopathy, an associated absolute lymphocytosis greater than 50% containing at least 10% of atypical lymphocytes in the peripheral blood, development of transient heterophil and persistent antibody responses against EBY, and abnormal liver function tests. 4% of infected young adults show an icteric manifestation and 50% have splenomegaly. In addition, EBV is implicated in Burkitt lymphoma, nasopharyngeal carcinoma and Hodgkin's disease. A syndrome similar to infectious mononucleosis can be caused by cytomegalovirus, toxoplasmosis and other viral infections. Therefore the differential diagnosis is of major importance. Serological tests like EIA are very useful for the detection of anti-EBV IgG and IgM antibodies, especially in cases where heterophil antibodies are absent. In a fresh infection IgM antibodies against VCA and EA are determined by immunofluorescence or ELISA. Later on VCA IgG appear followed by EBNA-1 IgG antibodies. Correspondingly the simultaneous activation of VCA IgM and EBNA-1 IgG indicates a reactivation of an EBV infection.

Product	Cat.No.	Incubation	Testprinciple (Qualitative/ Quantitative)	Standard Range	Sample Volume	Sample Dilution	Specials
EBV (EA) IgG ELISA	EIA-6203	60/60/20	Quantitative	0-100 arbU/ml	Serum/ Plasma 10 µl	1:101	
EBV (EA) IgM ELISA	EIA-6204	60/60/20	Qualitative		Serum/ Plasma 10 µl	1:101	
EBV VCA IgA ELISA	EIA-4472	60/30/15	Qualitative		Serum/ Plasma 10 µl	1:101	
EBV-VCA IgG ELISA	EIA-3475	60/30/15	Qualitative		Serum/ Plasma 10 µl	1:101	
EBV-VCA IgM ELISA	EIA-3476	60/30/15	Qualitative		Serum/ Plasma 10 µl	1:101	
EBV-EBNA-1 IgG ELISA	EIA-4246	60/30/15	Qualitative		Serum/ Plasma 10 µl	1:101	
EBV-EBNA-1 IgM ELISA	EIA-4247	60/30/15	Qualitative		Serum/ Plasma 10 µl	1:101	
Epstein Barr Virus EBV (EBNA) IgG ELISA	EIA-3906	60/60/20	Quantitative	0-100 arbU/ml	Serum/ Plasma 10 µl	1:101	



FASCIOLA P

Fasciolasis is a parasitic disease caused by liver fluke species of the genus Fasciola: Fasciola hepatica and Fasciola gigantica. While F. hepatica is found on a global scale, F. gigantica can be found in humans and animals in tropic regions of Africa and Asia. However, in some parts of Africa and Asia, the two species overlap. Today, fasciolasis is considered an important human disease and several geographic areas have been described as endemic for the disease in humans, including hypoendemic (prevalence < 1%), mesoendemic (prevalence between 1% and 10%) and hyperendemic (> 10%) situations, with intensities ranging from low to very high, and estimates of up to 17 million people infected worldwide. This may even be an underestimate if the total lack of data from numerous Asian and African countries is considered. Moreover, in the last two decades, human fasciolasis has been emerging in many regions, a phenomenon that has partly been related to climate change. Recent studies have shown that the high pathogenicity of this disease is not only restricted to the acute phase, but also to long-term liver fluke infection, the immune-modulation of fasciolasis in the acute phase, and their immune suppression effect in chronic and advanced chronic phases. All this appears to be in the background of usual co-infections with other parasitic and infectious diseases. Considering this scenario of increasing concern, WHO decided to launch a worldwide initiative against this disease. Therefore, the capacity to diagnose human fasciolasis correctly becomes imperative. Fasciola hepatica causes liver rot in sheep and cattle. Snails are the first intermediate host and encystation then occurs on aquatic vegetation. Humans usually acquire infection by eating contaminated freshwater plants but can occasionally be infected by drinking unboiled contaminated water.
Clinical aspects: Adult worms usually reside in the bile ducts, where they can live for many years, and produce eggs that pass out with bile into the feces. The early phase of migration of parasites through the liver can cause liver parenchymal destruction and be associated with fever, pain and hepatomegaly (6-12 weeks following ingestion). Diagnosis: In generally made via microscopy by identifying characteristic eggs in fecal samples or bile specimen. (However egg production does not begin until approx. 3 months after infection.) Serological testing becomes positive during the early phase of migration through the liver and is therefore useful in diagnosing early symptoms before the appearance of eggs in the feces.

Product	Cat.No.	Incubation	Testprinciple (Qualitative/ Quantitative)	Standard Range	Sample Volume	Sample Dilution	Specials
Fasciola IgG ELISA	EIA-4503	60/30/15	Qualitative		Serum/ Plasma 10 µl	1:101	

FILARIASIS P

Filariasis (or philariasis) is a parasitic disease caused by an infection with roundworms of the Filarioidea type. These are spread by blood-feeding black flies and mosquitoes. This disease belongs to the group of diseases called helminthiases. Eight known filarial nematodes use humans as their definitive hosts. These are divided into three groups according to the niche within the body they occupy. Wuchereria bancrofti, Brugia malayi, and Brugia timori causes Lymphatic filariasis. Loa loa (the eye worm), Mansonella streptocerca, and Onchocerca volvulus causes Subcutaneous filariasis (Loiasis; Streptocerciasis; Onchocerciasis). Mansonella perstans and Mansonella ozzardi causes Serous cavity filariasis (Perstans filariasis). The adult worms, which usually stay in one tissue, release early larval forms known as microfilariae into the host's bloodstream. These circulating microfilariae can be taken up with a blood meal by the arthropod vector; in the vector, they develop into infective larvae that can be transmitted to a new host.

Product	Cat.No.	Incubation	Testprinciple (Qualitative/ Quantitative)	Standard Range	Sample Volume	Sample Dilution	Specials
Filariasis ELISA	EIA-5972	60/30/15	Qualitative		Serum/ Plasma 10 µl	1:101	

Infectious Diseases ELISAS

GIARDIA LAMBLIA P

Giardia lamblia is one of the most common human intestinal protozoan pathogens worldwide. The incidence strongly depends on the geographic region and reaches 2-7% in central Europe and exceeds 50% in tropical countries. The life cycle of Giardia lamblia is characterized by two stages: the trophozoite and the cyst stage. The trophozoite is the motile dividing stage and inhabits the upper small intestine. Ascending infections of the gallbladder may also occur. The cyst is the infective form of the parasite. It develops in the intestine and is excreted with the faeces. Cysts are transmitted via contaminated food or drinking water but also from persons to persons. The clinical picture of a Giardia lamblia infection ranges from the asymptomatic carrier state to acute diarrhea, which is often accompanied by abdominal pain and flatulence. Chronic giardiasis can cause severe malabsorption syndrome. Giardiasis is usually diagnosed by microscopic detection of trophozoites and/or cysts in faecal smears after commonly used staining techniques or direct immune fluorescence. These methods are time-consuming, require trained personnel and can only detect parasites with intact morphology. Immunologic methods like enzyme immunoassays detecting Giardia lamblia antigens may overcome these problems.

Product	Cat.No.	Incubation	Testprinciple (Qualitative/ Quantitative)	Standard Range	Sample Volume	Sample Dilution	Specials
Giardia lamblia Ag (stool) ELISA	EIA-3477	60/30/10	Qualitative		Stool 50 µl / 100 µl/0.1 g	1:2 / 1:8	MOQ: 5 kits
Giardia/ Cryptospori-dium Ag (stool) ELISA (RUO)	EIA-6059	60/30/10	Qualitative		Stool 50 µl / 100 µl/0.1 g	1:2 / 1:8	MOQ: 5 kits

HAEMOPHILUS INFLUENZAE (HIB) B

Haemophilus influenzae type B (HiB) is a very common cause of invasive critical infectious diseases in children up to the age of six. Following infection the symptoms of the disease include: Pericarditis, osteomyelitis, meningitis, encephalitis, pneumonia, sinusitis and otitis. In many cases the disease is lethal or leads to neurological damage, which cannot always be prevented by rapid antibiotic therapy. The underlying reason for the disease is very often a latent immunodeficiency with a specifically reduced humeral immune response to the polyribosylribitolphosphate (PRP) in the polysaccaride encapsulation of the bacterium. In children another reason is the immaturity of the immune system. Today often the term ,,immunocompromised patients“ is used, comprising all acquired and innate specific and unspecific immunodeficiencies. As a result, in children of 3 months of age or older a vaccination with different sorts of PRP-containing vaccines is recommended. This can lead to a clear reduction in the number of infections with Haemophilus influenzae type B. The titer of antibodies produced by vaccination can be used to confirm whether the vaccination has been successful. HiB IgG ELISA is used to measure the level of PRPspecific IgG-antibodies following a 4-6 week period after complete immunization to monitor the humeral immune status of children or other individuals at risk.

Product	Cat.No.	Incubation	Testprinciple (Qualitative/ Quantitative)	Standard Range	Sample Volume	Sample Dilution	Specials
Haemophilus influenzae IgG ELISA	EIA-2530	60/60/30	Quantitative	0,08-4,00 µg/ml	Serum/ Plasma 20 µl	1:26	

HANTAVIRUS V

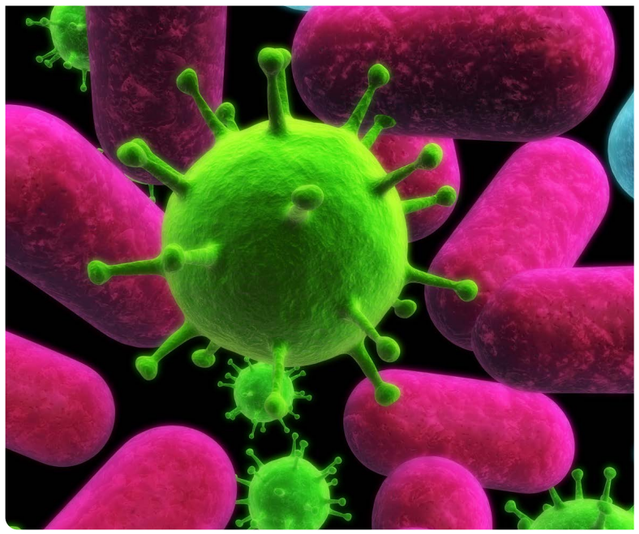
Hantaviruses are negative sense RNA viruses in the Bunyaviridae family. Humans may be infected with Hantaviruses through urine, saliva or contact with rodent waste products. Some Hantaviruses may lead to serious diseases in humans, such as hemorrhagic fever with renal syndrome (HFRS) and hantavirus pulmonary syndrome (HPS). Human infections of Hantaviruses have almost entirely been linked to human contact with rodent excrement, but recent human-to-human transmission has been reported with the Andes virus in South America. Hantavirus has an incubation time of two to four weeks in humans before symptoms of infection occur. Regions especially affected by HFRS include China, the Korean Peninsula, Russia (Hantaan, Puumala and Seoul viruses), and northern and western Europe (Puumala and Dobrava virus).

Product	Cat.No.	Incubation	Testprinciple (Qualitative/ Quantitative)	Standard Range	Sample Volume	Sample Dilution	Specials
Hanta Virus IgG ELISA	EIA-5858	60/30/15	Qualitative		Serum/ Plasma 10 µl	1:101	
Hanta Virus IgM ELISA	EIA-5859	60/30/15	Qualitative		Serum/ Plasma 10 µl	1:101	

HELICOBACTER PYLORI B

Helicobacter pylori is a spiral Gram-negative bacterium (2 µm to 6.5 µm in size, flagellated) which colonizes the human gastric mucosa. The organism is found in the mucus layer and adheres to the surface mucus epithelium of the stomach but generally does not penetrate the gastric mucosa directly. However, there is a secondary inflammatory response in the mucosa leading to chronic active gastritis. Helicobacter pylori is the primary causative agent in most cases of peptic ulcer disease. In 1994, the WHO classified Helicobacter pylori as a category 1 carcinoma. Infection rate in Europe is about 30%-40%, worldwide about 50%. There is an inverse relationship between the presence of Helicobacter pylori infection and socioeconomic status. In developing countries, people acquire the infection at an early age such that by young adulthood as many as 90% of the population might have Helicobacter pylori gastritis. In developed western countries the prevalence of Helicobacter pylori gastritis is much lower. Under these conditions, the rate of acquisition is much slower (roughly 1% per annum) and the older one is, the more likely one is to be infected with the organism.

Product	Cat.No.	Incubation	Testprinciple (Qualitative/ Quantitative)	Standard Range	Sample Volume	Sample Dilution	Specials
Helicobacter pylori IgA ELISA	EIA-3483	60/30/15	Quantitative	1-150 DU/ml	Serum/ Plasma 10 µl	1:101	
Helicobacter pylori IgG ELISA	EIA-3484	60/30/15	Quantitative	1-150 DU/ml	Serum/ Plasma 10 µl	1:101	
Helicobacter pylori IgG ELISA	EIA-1791	30/30/20	Qualitative		Serum 5 µl	1:40	
Helicobacter pylori IgM ELISA	EIA-2111	30/30/20	Qualitative		Serum 5 µl	1:40	
H. pylori Ag (stool) ELISA	EIA-6167	120/20	Quantitative	0-1 µg/ml	Stool 0,2 g	See users manual	Extraction kit available

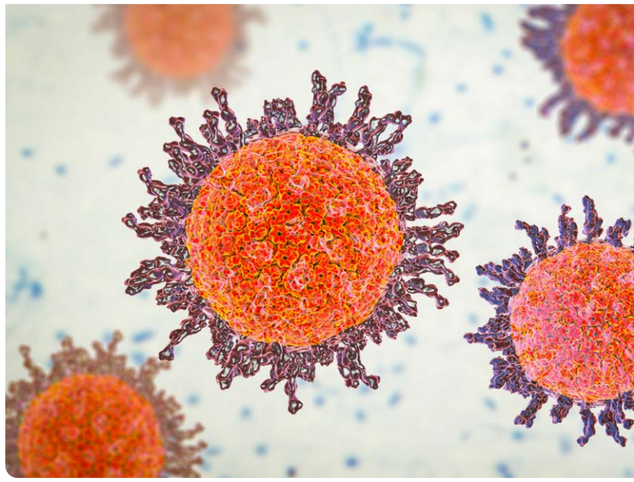


HEPATITIS V

Hepatitis is inflammation of the liver. Several different viruses cause viral hepatitis. They are named the hepatitis A, B, C, D, and E viruses.
All of these viruses cause acute, or short-term, viral hepatitis.The hepatitis B, C, and D viruses can also cause chronic hepatitis, in which the infection is prolonged, sometimes lifelong.
Hepatitis A: is a liver disease caused by the hepatitis A virus (HAV). Hepatitis A can affect anyone. Hepatitis A can occur in situations ranging from isolated cases of disease to widespread epidemics. It is spread primarily through food or water contaminated by feces from an infected person. Rarely, it spreads through contact with infected blood.
Hepatitis B: is a serious disease caused by a virus that attacks the liver. The virus, which is called hepatitis B virus (HBV), can cause lifelong infection, cirrhosis (scarring) of the liver, liver cancer, liver failure, and death.
Hepatitis C: is a liver disease caused by the hepatitis C virus (HCV), which is found in the blood of persons who have the disease. HCV is spread by contact with the blood of an infected person.
Hepatitis D: is a liver disease caused by the hepatitis D virus (HDV), a defective virus that needs the hepatitis B virus to exist. Hepatitis D virus (HDV) is found in the blood of persons infected with the virus.

Product	Cat.No.	Incubation	Testprinciple (Qualitative/ Quantitative)	Standard Range	Sample Volume	Sample Dilution	Specials
HAV Ab ELISA	EIA-4233	60/60/20	Quantitative	0-100 mIU/ml	Serum/ Plasma 100 µl	2:1	
HAV IgM ELISA	EIA-4432	60/60/20	Qualitative		Serum/ Plasma 10 µl	1:101	
HBc Ab (screening) ELISA	EIA-4872	60/60/20	Qualitative		Serum/ Plasma 50 µl	1:2	*
HBc IgM (capture quantitative) ELISA	EIA-5143	60/60/20	Quantitative	0-100 U/ml	Serum/ Plasma 10 µl	1:101	*
HBe Ag&Ab ELISA	EIA-5145	60/60/20	Qualitative		Serum/ Plasma 100 µl		*
HBs Ab ELISA	EIA-5144	60/60/20	Quantitative	0-250 mIU/ml	Serum/ Plasma 100 µl	2:1	*
Hbs Ag (screening) ELISA (4th generation)	EIA-4548 (96 wells) EIA-5051 (192 wells)	120/30	Qualitative		Serum/ Plasma 150 µl		*
HBs Ag Confirmation ELISA	EIA-5150 (20 tests) EIA-5151 (40 tests9	30	Qualitative		Serum/ Plasma 5 µl	1:100	* For combina-tion with EIA-4548 &EIA-5051
HCV Ab (screening) ELISA (V 4.0)	EIA-4549 (96 wells) EIA-4332 (192 wells) EIA-5063 (480 wells)	45/45/15	Qualitative		Serum/ Plasma 10 µl	1:21	*
HCV Ab confirmation ELISA	EIA-5149	60/60/20	Qualitative		Serum/ Plasma 20µl	1:50	*
HCV IgM (sandwich) ELISA	EIA-5148	60/60/20	Quantitative	0-250 arbU/ml	Serum/ Plasma 10 µl	1:101	*
HDV Ab (total antibody) ELISA	EIA-5152	60/60/20	Qualitative		Serum/ Plasma 100 µL		*
HDV IgM (capture) ELISA	EIA-5146	60/60/20	Qualitative		Serum/ Plasma 100 µL	1:200	*
HDV Ag ELISA	EIA-5147	120/60/20	Qualitative		Serum/ Plasma 100 µl	1:1	*
HEV Ab ELISA	EIA-5805	45/45/15	Qualitative		Serum/ Plasma 100 µl		
HEV IgG ELISA	EIA-4145	45/45/15	Qualitative		Serum/ Plasma 10 µl	1:21	
HEV IgM ELISA	EIA-4417	60/60/20	Qualitative		Serum/ Plasma 10 µl	1:101	

* Country sales restrictions

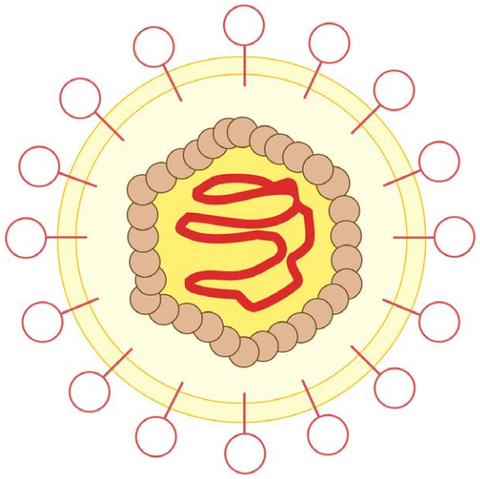


HERPES SIMPLEX VIRUS (HSV) V

Herpes simplex is an enveloped DNA virus (150-200 nm in diameter) belonging to the alphaherpesviridae. Based on antigenic, biochemical and biologically differences it can be divided into two serotypes, HSV-1 and HSV-2. Man is the only known natural host and source of the virus. HSV-type 1 typically causes oral herpes, while HSV-type 2 typically affects the genital area. Most of the time, HSV-1 and HSV-2 are inactive, or „silent“, and cause no symptoms, but some infected people have „outbreaks“ of blisters and ulcers. Once infected with HSV, people remain infected for life.
Herpes simplex viruses are amongst the most common infectious agents of man, and either HSV type appears to be capable of infecting similar body sites. A high percentage of the adult population is seropositive (approx. 90% HSV-1, in dependence on the socio economic status 10-30% HSV-2). Primary HSV-1 infection usually occurs in early childhood (6 to 18 months of age). HSV-2 usually produces mild symptoms, and most people have no recognized symptoms.

Product	Cat.No.	Incubation	Testprinciple (Qualitative/ Quantitative)	Standard Range	Sample Volume	Sample Dilution	Specials
HSV-1 IgG ELISA	EIA-3485	60/30/15	Qualitative		Serum/ Plasma 10 µl	1:101	
HSV-1 IgM ELISA	EIA-3486	60/30/15	Qualitative		Serum/ Plasma 10 µl	1:101	
HSV-2 IgG ELISA	EIA-3487	60/30/15	Qualitative		Serum/ Plasma 10 µl	1:101	
HSV-2 IgM ELISA	EIA-3488	60/30/15	Qualitative		Serum/ Plasma 10 µl	1:101	
HSV-1+2 IgG ELISA	EIA-3489	60/30/15	Qualitative		Serum/ Plasma 10 µl	1:101	
HSV-1+2 IgM ELISA	EIA-3490	60/30/15	Qualitative		Serum/ Plasma 10 µl	1:101	
HSV-1 IgG ELISA	EIA-1802	30/30/15	Qualitative		Serum 5 µl	1:40	Formerly BioCheck
HSV-1 IgM ELISA	EIA-1803	30/30/15	Qualitative		Serum 5 µl	1:40	Formerly BioCheck
HSV-2 IgG ELISA	EIA-1795	30/30/15	Qualitative		Serum 5 µl	1:40	Formerly BioCheck
HSV-2 IgM ELISA	EIA-1794	30/30/15	Qualitative		Serum 5 µl	1:40	Formerly BioCheck

Infectious Diseases ELISAS



HUMAN IMMUNODEFICIENCY VIRUS (HIV) V

Epidemiological evidence indicates that an infectious agent transmitted through intimate contact, intravenous drug use or use of infected blood or blood products leads to Acquired Immunodeficiency Syndrome (AIDS). This disease affects T-cell mediated immunity, resulting in severe lymphopenia and a reduced subpopulation of helper T-lymphocytes. Destruction of this T-lymphocyte population by the virus causes an immune deficiency, resulting in a reduced or deficient response to subsequent infections. Consequently, infections become more severe and may cause death. At present, there is no successful treatment for AIDS. The etiological agent has been identified as a retrovirus, human immunodeficiency virus type 1 (HIV-1). A closely related, but distinct type of immunodeficiency virus, designated HIV-2, has also been isolated. This virus causes a disease that is indistinguishable from AIDS. Serological cross-reactivity between HIV-1 and HIV-2 has been shown to be highly variable from sample to sample. This variability requires the inclusion of antigens to both HIV-1 and HIV-2 for the screening of antibodies to HIV-1 and HIV-2. The presence of anti-HIV-1 and/or anti-HIV-2 and/or HIV p24 antigen in the blood indicates potential infection with HIV-1 and/or HIV-2 and consequently this blood should not be used for transfusion or for manufacture of injectable products.

Product	Cat.No.	Incubation	Testprinciple (Qualitative/ Quantitative)	Standard Range	Sample Volume	Sample Dilution	Specials
HIV 1&2 Ab&Ag (screening) ELISA	EIA-5181 (96 wells) EIA-4847 (192 wells)	60/30/ 30/30	Qualitative		Serum/ Plasma 150 µl	3:1	Country sales restrictions

HUMAN T-CELL LYMPHOTROPIC VIRUS TYPE I&II (HTLV) V

HTLV I&II are retroviruses not related genetically to HIV1&2; however, they have similar routes of transmission and can have extremely long period of latency prior to manifestation of disease. HTLV I is endemic in southern Japan, the Caribbean and the US and many other scattered population trough the world. HTLV II is endemic in some native American populations but is detected mostly in intravenous drug users and their sexual partners.
HTLV I&II are transmitted transplacentally, parenterally, by sexual contacts and by infected blood. ELISA has been applied to the diagnosis of HTLV I&II serology by detecting specific antibodies in plasma and sera.

Product	Cat.No.	Incubation	Testprinciple (Qualitative/ Quantitative)	Standard Range	Sample Volume	Sample Dilution	Specials
HTLV I&II Ab (screening) ELISA	EIA-4404	45/45/15	Qualitative		Serum/ Plasma 100 µl		Country sales restrictions

HUMAN PAPILLOMA VIRUS (HPV) V

Human Papilloma Viruses are double stranded DNA organisms, without envelope, bearing to the group of Papovavirus. HPV infects epithelial cells and are associated with benign and malign lesions as papillomas, condilomas and carcinomas. Human Papilloma Viruses are pretty heterogenic and are classified in several types that include high-risk oncogenic types (16,18,31,33,35,39,45,51,52,56,58,59,68) and low risk non oncogenic types. Synthetic antigens have been recently used to produce vaccines able to protect against infections due to the most carcinogenic strains of HPV, whose distribution has started in many countries of the world and whose real efficacy as vaccine is under field investigation.

Product	Cat.No.	Incubation	Testprinciple (Qualitative/ Quantitative)	Standard Range	Sample Volume	Sample Dilution	Specials
HPV IgG ELISA (RUO)	EIA-4907	60/60/20	Qualitative		Serum/ Plasma 10 µl	1:101	*

*The product is supplied for research purpose only. It is not for use in the diagnosis or for the follow-up of patients administered with the vaccines containing HPV antigens.

INFLUENZA V

Influenza are RNA viruses of the family Orthomyxoviridae. Influenza viruses are divided into three types, designated A, B, and C which are differentiated by the specificity of a soluble antigen associated with the internal ribonucleoprotein component of the virion. The virions are spherical particles of 80-120 nm in diameter consisting of the ribonucleoprotein component and enveloped by matrix protein and a lipid bilayer which contains two spikeline structures: viral hemagglutinin (H) and viral neuraminidase (N). Influenza viruses are respiratory tract pathogens which are transmitted by direct contact, large-droplet infection, or by contaminated surfaces. Influenza types A and B are responsible for epidemics of respiratory illness that occur almost every winter and are often associated with increased rates of hospitalization and death. Type C infections usually cause either a very mild respiratory illness or no symptoms at all; it does not cause epidemics and does not have the severe public health impact that influenza types A and B do. Pandemics of influenza virus type A infections have occurred at 10 to 20 year intervals since 1890. Apparently this results from alterations in the composition of the H and N antigens (antigenic „drift“ and antigenic „shift“). Currently two subtypes of Influenza A and B are circulating worldwide. Normally influenza is a self-limiting disease lasting for 3 to 7 days, but some people develop serious and potentially life-threatening medical complications, such as pneumonia, particularly in children, elderly people and other vulnerable groups.

Product	Cat.No.	Incubation	Testprinciple (Qualitative/ Quantitative)	Standard Range	Sample Volume	Sample Dilution	Specials
Influenza Virus A IgA ELISA	EIA-3792	60/30/15	Qualitative		Serum/ Plasma 10 µl	1:101	
Influenza Virus A IgG ELISA	EIA-3793	60/30/15	Qualitative		Serum/ Plasma 10 µl	1:101	
Influenza Virus A IgM ELISA	EIA-3794	60/30/15	Qualitative		Serum/ Plasma 10 µl	1:101	
Influenza Virus B IgA ELISA	EIA-3795	60/30/15	Qualitative		Serum/ Plasma 10 µl	1:101	
Influenza Virus B IgG ELISA	EIA-3796	60/30/15	Qualitative		Serum/ Plasma 10 µl	1:101	
Influenza Virus B IgM ELISA	EIA-3797	60/30/15	Qualitative		Serum/ Plasma 10 µl	1:101	

JAPANESE ENCEPHALITIS V

Japanese encephalitis, previously known as Japanese B encephalitis to distinguish it from Economo's A encephalitis, is a disease caused by the mosquito-borne Japanese encephalitis virus. The Japanese encephalitis virus is a virus from the family Flaviviridae. Domestic pigs and wild birds (herons) are reservoirs of the virus. Transmission to humans may cause severe symptoms. Amongst the most important vectors of this disease are the mosquitoes Culex tritaeniorhynchus and Culex vishnui. This disease is most prevalent in Southeast Asia and East Asia. Exposure to JEV causes a disease with a number of symptoms including encephalitis. The JE IgG/IgM ELISA employs a recombinant antigen called JERA, which can be used as a rapid serological marker for JEV infection. The JERA protein is a recombinant antigen, which consists of a stretch of peptides from different parts of the JE.

Product	Cat.No.	Incubation	Testprinciple (Qualitative/ Quantitative)	Standard Range	Sample Volume	Sample Dilution	Specials
JE (Japanese Encephalitis) IgG ELISA RUO	EIA-4518R	60/60/ 5/10	Qualitative		Serum 3 µl	1:300	
JE (Japanese Encephalitis) IgM Capture ELISA	EIA-4505	60/60/ 60/5/10	Qualitative		Serum 4 µl	1:100	

LEGIONELLA PNEUMOPHILA B

Legionellae are aerobic gram-negative facultative intracellular parasites of certain protozoa. They are found in freshwater environments worldwide and can cause respiratory disease (legionellosis) in humans. Legionella was first identified after an outbreak of pneumonia involving delegates of the 1976 American Legion Convention at a Philadelphia hotel. The genus Legionella currently has at least 50 species comprising 70 distinct serogroups. One species of Legionella, L. pneumophila, is the aetiological agent of approximately 90% of legionellosis cases, and serogroup 1 (Sg1) accounts for about 84% of these cases. L. pneumophila multiplies itself at temperatures between 25°C and 42°C, with an optimal growth temperature of 35°C. Legionella thrives in warm, stagnant water in the environment and in artificial systems such as cooling towers, evaporative condensers, hot and cold water systems and spa pools that mimic the natural environment in which the organism thrives. These systems also provide the means by which aerosols/droplets are generated and the organism dispersed into the atmosphere. Legionellosis can be acquired by the inhalation of aerosols containing Legionella bacteria or by micro-aspiration of ingested water contaminated with Legionella. Person-to-person transmission is not thought to be a risk. The likelihood of contracting Legionnaires' disease depends on the level of contamination in the water source, the susceptibility of the person exposed, and the intensity of exposure. Legionnaires' disease is characterized as an „opportunistic“ disease that attacks individuals who have an underlying illness or a weakened immune system. Predisposing risks include increasing age, being male, heavy smoking, alcohol abuse, chronic lung disease, immunosuppressive therapy, cancer chemotherapy, organ or bone marrow transplant, and corticosteroid therapy. Legionellosis can appear in two distinct clinical presentations: Legionella pneumonia (Legionnaires' disease) with an incubation period of approx. 2-10 days (may extend up to 16-20 days) and Pontiac fever (incubation period: normally 12-48 hours). Legionella pneumonia (Legionnaires' disease) is a serious form of pneumonia that carries with it a case-fatality ratio of 10-15%. Legionnaires' disease patients initially present with cough, fever and nonspecific symptoms including malaise, myalgia and headache. Some patients develop shaking chills, chest pain, diarrhea, delirium or other neurologic symptoms. Extra pulmonary involvement is rare. Pontiac fever is a milder form of the disease without manifestations of pneumonia and presents as an influenza-like illness. Symptoms may include headache, chills, muscle aches, a dry cough and fever. It is usually self-limiting and typically does not require treatment. The attack rate is much higher than for Legionnaires' disease (up to 95% of those exposed).

Product	Cat.No.	Incubation	Testprinciple (Qualitative/ Quantitative)	Standard Range	Sample Volume	Sample Dilution	Specials
Legionella pneumophila IgG ELISA	EIA-5645	60/30/15	Qualitative		Serum/ Plasma 10 µl	1:101	
Legionella pneumophila IgM ELISA	EIA-5646	60/30/15	Qualitative		Serum/ Plasma 10 µl	1:101	

LEISHMANIA P

Leishmania are protozoa belonging to the family trypanosomatidae. The parasites exist in two forms: the promastigotes in the midgut of the vector insect, and the amastigotes within the phagolysosomes of macrophages in their mammalian hosts. In the macrophages they live as round, non-motile amastigotes (3 - 7 µm in diameter). The macrophages are ingested by the sandfly during blood-meal and the amastigotes are released into their stomach. Almost immediately the amastigotes transform in to the motile, elongated (10 - 20 µm), flagellate promastigote form, which migrate to the alimentary tract of the fly and after multiplication move forward to the salivary glands of the insect. Leishmaniases are a globally widespread group of parasitic diseases; the "type" is determined by the primary location of the macrophages that are infected. In humans four different forms of Leishmaniasis with a broad range of clinical manifestations are present; all can have devasting consequences. Leishmaniasis currently affects some 12 million people in 88 countries, all but 16 of which are in the developing world. It is estimated that 350 million people are exposed to the risk of infection by the different species of Leishmania parasite; the annual incidence of new cases is about 2 million (1 - 1.5 million cases of CL, 500,000 cases of VL). Visceral leishmaniasis (VL) is the most severe form of the disease, which, if untreated, has a mortality rate of almost 100%. Like many other tropical diseases, the leishmaniases are related to economic development and man-made environmental changes, which increase exposure to the sandfly vector. The geographical distribution is limited by the distribution of the sandfly. AIDS and other immunosuppressive conditions increase the risk of Leishmania infected people developing visceral illness (VL). Leishmania/ HIV co-infections are considered to be a real "emerging disease", especially in south-western Europe, where 25-70% of adult VL cases are related to HIV infection, and 1.5-9.5% of AIDS cases suffer from newly acquired or reactivated VL. Intravenous drug users have been identified as the main population at risk.

Product	Cat.No.	Incubation	Testprinciple (Qualitative/ Quantitative)	Standard Range	Sample Volume	Sample Dilution	Specials
Leishmania infantum IgG ELISA	EIA-3843	60/30/15	Qualitative		Serum/ Plasma 10 µl	1:101	

LEPTOSPIRA P

The clinical manifestations of leptospirosis range from a mild catarrh-like illness to icteric disease with severe liver and kidney involvement. Natural reservoirs for leptospirosis include rodents as well as a large variety of domesticated mammals. The organisms occupy the lumen of nephritic tubules in their natural host and are shed into the urine. Human infection derives from direct exposure to infected

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animals (veterinarians, abattoir workers, or dairy workers for example) or by exposure to environments contaminated by animal carriers (e.g. agricultural workers). Bathing or swimming in water sources about which livestock have been pastured has been demonstrated to be a potential infection hazard. The organisms enter the host through skin abrasions, mucosal surfaces or the eye. The incubation period can range from 3 to 30 days but is usually found to be IO to 12 days. Antibodies can become detectable by the 6th to 10th day of disease and generally reach peak levels within 3 to 4 weeks. Antibody levels then gradually recede but may remain detectable for years.

Product	Cat.No.	Incubation	Testprinciple (Qualitative/ Quantitative)	Standard Range	Sample Volume	Sample Dilution	Specials
Leptospira IgG ELISA	EIA-5751	60/30/15	Qualitative		Serum/ Plasma 10 µl	1:101	
Leptospira IgM ELISA	EIA-5752	60/30/15	Qualitative		Serum/ Plasma 10 µl	1:101	

MALARIA P

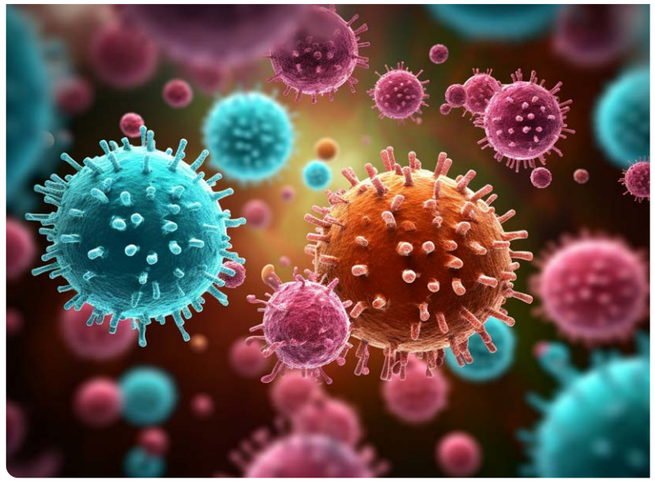
Malaria is one of the most common diseases in the world. More than half the world population lives in malaria-infected areas. Over 200 million cases annually result in up to 3 million deaths each year; a majority of which are in young children. In nonendemic areas, it is one of the most important imported diseases, resulting in a number of deaths in late-diagnosed or unsuspected cases each year. The disease is caused by protozoa of the genus Plasmodium, transmitted by the bite of the female Anopheles mosquito. There are four species causing human malaria: P.falciparum, P.vivax, P.malariae, and P.ovale. The disease may also be transmitted by transfusion of infected blood. Once in the blood the sporozoite makes its way to the liver where for the next 2 weeks merozoites are produced. These are released into the blood where they invade the red cells and produce more merozoites, causing the cells to rupture. It is this rupturing that is responsible for the clinical symptoms.
Of the four species, P.falciparum is the most common and the most virulent, causing most malaria-related deaths. P.vivax is the next most common cause of malaria. Although rarely fatal, this form of malaria can be accompanied by severe clinical symptoms. It is a common cause of malaria in S.E.Asia and S.America.

Product	Cat.No.	Incubation	Testprinciple (Qualitative/ Quantitative)	Standard Range	Sample Volume	Sample Dilution	Specials
Malaria Ab ELISA	EIA-5511	60/30/15	Qualitative		Serum/ Plasma 10 µl	1:101	Detection of: P. vivax, P. falcipa-rum
Malaria Ab ELISA	EIA-5048	60/60/30	Quantitative	0-5 IU/ml	Serum/ Plasma 50 µl	1:4	Detection of: P.fal-ciparum, P. Vivax, P.Malariae, P. Ovale, P.Knowlesi

MEASLES V

Measles or morbilli virus belongs to the RNA viruses of the family Paramyxoviridae. The virions are spherical particles of 150-250 nm in diameter consisting of the ribonucleoprotein with helical symmetry and an envelope with spikes containing the strain-specific and hemagglutinating antigens. Morbilli viruses have no neuraminidase activity. Measles is a classic childhood disease. The virus is endemic: at the age of 20 about 90% of the population has had immunological experience with it. Newborns are protected by maternal antibodies for the first 3-4 months of life; the active disease leaves lifelong immunity. The measles virus has a contagiosity index of about 96%, is worldwide distributed, and can be serious. Bacterial superinfection was a serious threat in the preantibiotic era, but the prognosis of uncomplicated measles is now good. CNS complications such as encephalomyelitis (0.1%) which may occur after the acute phase of measles infection subsides, however still have a high mortality (10%). Prognosis of recovery in these patients is poor. Between 10-30% of all cases are fatal; 20-50% develop significant damages. Subacute sclerosing panencephalitis (SSPE) is a rare (1:1000) degenerative disease of the CNS which is thought to be a slow virus infection.

Product	Cat.No.	Incubation	Testprinciple (Qualitative/ Quantitative)	Standard Range	Sample Volume	Sample Dilution	Specials
Measles Virus IgG ELISA	EIA-3844	60/30/15	Qualitative		Serum/ Plasma 10 µl	1:101	
Measles Virus IgG Avidity	EIA-5967	60/10/ 30/15	Qualitative		Serum/ Plasma 10 µl	1:101	
Measles Virus IgM ELISA	EIA-3845	60/30/15	Qualitative		Serum/ Plasma 10 µl	1:101	



MENINGITIS B

Neisseria meningitidis, also simply known as meningococcus, is a heterotrophic gram-negative diplococcal bacterium best known for its role in meningitis and other forms of meningococcal disease. It only infects humans. It is the only form of bacterial meningitis known to cause epidemics.
The bacteria, which can spread from person to person, usually first causes a colonization in the upper airway, but without symptoms. From there, it can penetrate into the bloodstream to the central nervous system and cause meningitis or develop into a full-blown bloodstream infection (meningococcemia). Twelve subtypes or serogroups of N. meningitidis have been identified, five (A, B, C, Y and W135) of which recognized to cause epidemics. The pathogenicity, immunogenicity, and epidemic capabilities differ according to the serogroup. Thus the identification of the serogroup responsible of a sporadic case is crucial for epidemic containment. The meningococcal vaccines currently approved for use in humans are made from the variant, purified capsular polysaccharides, which are characteristic of the bacteria membrane. Vaccines are available for serogroups A, C, Y and W135, but not serogroup B. Antibodies against the meningococcal capsular polysaccharides (MCP) are protective in adults and children above 2 years, and antibodies have been detected four years after vaccination.

Product	Cat.No.	Incubation	Testprinciple (Qualitative/ Quantitative)	Standard Range	Sample Volume	Sample Dilution	Specials
Meningitis IgG ELISA	EIA-4918	60/60/20	Qualitative		Serum/ Plasma 10 µl	1:101	

MUMPS V

Mumps viruses are RNA viruses of the family Paramyxoviridae. The virions are spherical particles of 150-250 nm in diameter consisting of a ribonucleoprotein with helical symmetry and enveloped by matrix protein and a lipid bilayer, which contains two spikeline structures: viral hemagglutinin (H) and viral neuraminidase (N). Mumps virus involves primarily the parotid and related salivary glands; however infection can lead to CNS disease and accumulation of the virus in CSF. Mumps (Epidemic Parotitis) is an acute contagious viral disease mostly occurring in children. Nearly 50% of all infections are subclinical. The highest incidence of clinical manifestations are found in the age group of 4 to 15 years. Secondary infections are rare because of long-lasting immunity. 10 to 35% of mumps cases develop orchitis, which occurs nearly always after puberty. The process is mostly unilateral and the prognosis usually good. Mumps virus has been one of the most important causes of viral CNS disease (meningitis and encephalitis) in USA; vaccine administration has greatly reduced its incidence.

Product	Cat.No.	Incubation	Testprinciple (Qualitative/ Quantitative)	Standard Range	Sample Volume	Sample Dilution	Specials
Mumps IgG ELISA	EIA-3846	60/30/15	Qualitative		Serum/ Plasma 10 µl	1:101	
Mumps IgM ELISA	EIA-3847	60/30/15	Qualitative		Serum/ Plasma 10 µl	1:101	

MYCOPLASMA PNEUMONIAE B

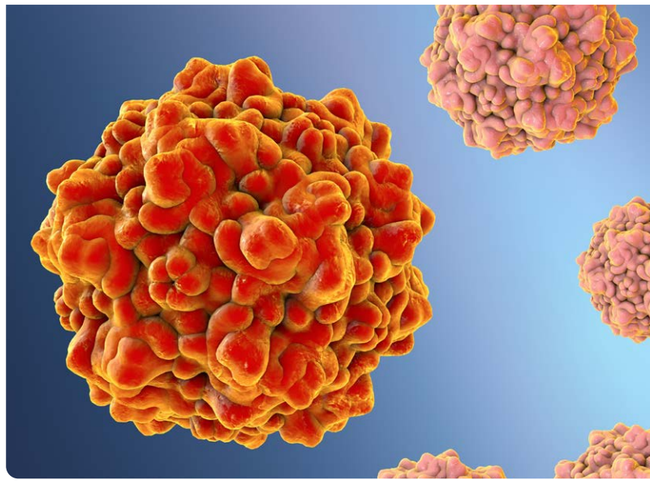
The mycoplasms belong to the class Mollicutes comprising three distinct families and four genera, one of which is Mycoplasma with over 60 species. Mycoplasms are the smallest free living organisms known (300 to 500 nm in diameter) and unlike regular bacteria they lack a cell wall. Mycoplasms are extracellular parasites, especially on mucous membranes, which can cause infections in human, animals, plants, and cell cultures. Mycoplasma pneumoniae is primarily a respiratory pathogen (obligat) in human involving the nasopharynx, throat, trachea, bronchi, bronchioles, and alveoli. Other Mycoplasms, M. buccale, M. faucium, M. orale and M. salivarium are commensals in the oral cavity. Mycoplasma hominis and Ureaplasma urealyticum inhabit primarily the genital tract and may act as opportunistic invaders. M. pneumoniae is by far the most important pathogen of this group. Infection with M. pneumoniae occurs worldwide. Its epidemiology has been studied primarily in the USA, Europe, and Japan. Infections are endemic in larger urban areas, and epidemic increases are observed at varying intervals. M. pneumoniae has been estimated to cause 15-20% of all pneumoniae; the rate is highest in children and young adults. 74% of infections with M. pneumoniae are asymptomatic, reinfection may occur. Naturally acquired immunity to infection with M. pneumoniae appears to be of limited duration (2-3 years).

Product	Cat.No.	Incubation	Testprinciple (Qualitative/ Quantitative)	Standard Range	Sample Volume	Sample Dilution	Specials
Mycoplasma pneumonia IgA ELISA	EIA-3848	60/30/15	Qualitative		Serum/ Plasma 10 µl	1:101	
Mycoplasma pneumonia IgG ELISA	EIA-3499	60/30/15	Qualitative		Serum/ Plasma 10 µl	1:101	
Mycoplasma pneumonia IgM ELISA	EIA-3500	60/30/15	Qualitative		Serum/ Plasma 10 µl	1:101	

PARAINFLUENZA V

Parainfluenza viruses are important viral pathogens causing upper and lower respiratory infections in adults and children. The viruses belong to the family of Paramyxoviridae. They are enveloped single-stranded RNA viruses with spherical or pleomorphic shape. Parainfluenza viruses are relatively large viruses of about 150-300 nm in diameter. On the basis of antigenic differences they are divided into four subtypes, of which type 4 is divided into two subtypes. Parainfluenza virus 1 and 3 belong to the paramyxovirus genus. Parainfluenza virus 2, 4a and 4b belong to the rubella virus genus along with mumps. The virus is ubiquitous; infections occur as epidemics as well as sporadically. Parainfluenza viruses are sensitive to detergents and heat but can remain viable on surfaces for up to 10 hours. Transmission occurs via droplets, aerosols and fomites (viruses survive on surfaces). Parainfluenza virus infections are primarily childhood diseases, the highest age-specific attack rates for croup occur in children below the age of 3 years. Type 3 infections occur earliest and most frequently, so that ~50% of children are infected during the first year of life and almost all by 6 years, as determined by seroepidemiological studies. Antibodies against types 1 and 2 are acquired less rapidly but 80% of children have antibodies by 10 years of age. Type 4 viruses induce few clinical illnesses but infections are common, 70 - 80% of children have antibodies by 10 years of age. In all age groups, the incubation period appears to be five to six days. Croup or laryngotracheobronchitis is the commonest clinical manifestation of infection. Parainfluenza viruses are found uncommonly associated with other respiratory tract infections in children such as tracheobronchitis, bronchiolitis, and bronchopneumonia. Occasionally, a mild non-specific illness is seen after parainfluenza virus infection. In adults, the virus is usually limited to causing inflammation in the upper parts of the respiratory tract.

Product	Cat.No.	Incubation	Testprinciple (Qualitative/ Quantitative)	Standard Range	Sample Volume	Sample Dilution	Specials
Parainfluen-za Virus IgA ELISA	EIA-3871	60/30/15	Qualitative		Serum/ Plasma 10 µl	1:101	
Parainfluen-za Virus IgG ELISA	EIA-3870	60/30/15	Qualitative		Serum/ Plasma 10 µl	1:101	



PARVOVIRUS B19 V

Parvoviruses are cubic single-stranded DNA viruses of about 18-32 nm lacking an envelope. Parvovirus B19 infects only humans, and since there are no cross-reactivities between animal parvoviruses and B19, transmission between pets and humans is not possible. Parvovirus B19 is the causative agent of Erythema infectiosum, the so-called “fifth disease”, a mild rash illness that occurs most commonly in children. Infected persons are contagious during the early part of the illness before the rash appears so in adults the rate of epidemia amounts to about 60%. About 20% of adults and children who are infected with parvovirus B19 do not develop any symptoms. Persons infected with the virus, however, do develop lasting immunity that protects them against infection in the future. Parvovirus B19 infection may cause a serious illness in persons with sickle-cell disease or similar types of chronic anemia as well as in persons who have problems with their immune system (people with leukemia or cancer, who are born with immune deficiencies, who have received an organ transplant, or who have HIV infection). Occasionally (less than 5% of all pregnant women infected with parvovirus B19) serious complications may develop during pregnancy: risk of Morbus haemolyticus fetalis.

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Product	Cat.No.	Incubation	Testprinciple (Qualitative/ Quantitative)	Standard Range	Sample Volume	Sample Dilution	Specials
Parvovirus B19 IgG ELISA	EIA-3503	60/30/15	Qualitative		Serum/ Plasma 10 µl	1:101	
Parvovirus B19 IgM ELISA	EIA-3504	60/30/15	Qualitative		Serum/ Plasma 10 µl	1:101	

RABIES VIRUS V

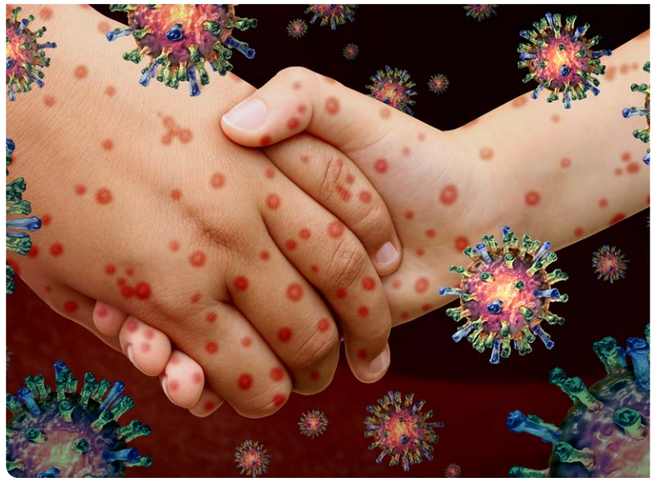
Rabies virus can infect all warm-blooded species and in many species the disease can present itself in two different forms. Furious rabies, in which predominantly the brain is infected and paralytic rabies in which predominantly the spinal cord is involved. When cells of the limbic system are infected the first changes in behavior characteristic of rabies may be observed. It has been suggested that the phase before infecting cells of the nervous system may take a considerable length of time, causing a variable incubation period from 10 days to several years. Hence the virus is present in the saliva, which favors the most natural way of transmission by biting in the various stages of the disease, also sporadic cased of aerosol infections have been documented. Carnivores, especially domestic dogs, and cats, and also rodent and recently bats, are usually involved in transmission of infections to dogs and men. Infections of dogs with rabies virus seem to be invariably fatal. Persistent in apparent infection accompanied by virus shedding has been documented in several human and animal species including cats and raccoons.

Product	Cat.No.	Incubation	Testprinciple (Qualitative/ Quantitative)	Standard Range	Sample Volume	Sample Dilution	Specials
Rabies Virus Antibody (human) ELI-SA (RUO)	EIA-5900	60/60/10-15	Qualitative/ Quantitative (titer)		Serum/ Plasma 10 µl	1:250	For Research Use Only

RESPIRATORY SYNCYTIAL VIRUS (RSV) V

Respiratory syncytial virus (RSV) is a negative-sense, enveloped RNA virus. The virion is variable in shape and size (average diameter of between 120 and 300 nm), is unstable in the environment (surviving only a few hours on environmental surfaces), and is readily inactivated. It is the causative pathogen for the most common infection of the respiratory tract. Respiratory syncytial virus (RSV) infections usually occur during annual community outbreaks during the late fall, winter, or early spring months. The timing and severity of outbreaks in a community vary from year to year. Most infants become infected with RSV in their first winter season; between 25% and 40% have signs or symptoms of bronchiolitis or pneumonia, and 0.5% to 2% require hospitalization. Most children recover from illness in 8 to 15 days; the majority of children hospitalized for RSV infection is under 6 months of age. Most children will have serological evidence of RSV infection by 2 years of age. RSV also causes repeated infections throughout life, usually associated with moderate-to-severe cold-like symptoms; however, severe lower respiratory tract disease may occur at any age, especially among elderly or among those with compromised cardiac, pulmonary, or immune systems.

Product	Cat.No.	Incubation	Testprinciple (Qualitative/ Quantitative)	Standard Range	Sample Volume	Sample Dilution	Specials
RSV IgA ELISA	EIA-3506	60/30/15	Qualitative		Serum 10 µl	1:101	
RSV IgG ELISA	EIA-3507	60/30/15	Qualitative		Serum 10 µl	1:101	
RSV IgM ELISA	EIA-3508	60/30/15	Qualitative		Serum 10 µl	1:101	



RUBELLA VIRUS V

Rubella is an enveloped RNA virus belonging to the togavirus. It has a spherical shape measuring about 50-70 nm in diameter. There appears to be only one antigenic type, and no cross-reactivity with alphavirus or other members of the togavirus group has been found. Rubella viruses are pathogens of the respiratory tract and transmitted mainly by droplet infection. Rubella is a worldwide common contagious disease with mild constitutional symptoms and a generalized rash. In childhood, it is an inconsequential illness, but when it occurs during pregnancy, there is a significant risk of severe damage to the fetus. The risk of congenital rubella depends primarily on the month of pregnancy in which infection is acquired: overall, app. 16% of infants have major defects at birth following maternal rubella in the first 3 months of pregnancy. Congenital rubella infection may lead to a syndrome with single or multiple organ involvements, known as embryopathia rubeolosa. In some cases infection is inapparent but results in consequential damages as eye defects, deafness, growth retardation, and others. Naturally acquired immunity usually is long-lasting, but reinfection is possible due to decreasing levels of circulating antibodies. For immunization a vaccine containing live virus is used.
Rubella Infection may be identified by detection of virus by PCR (prenatal), Hemagglutination inhibition (HAI), Haemolysis-in-gel test (HiG), detection of antibodies by EIA, ELISA. Measurement of antibodies in the serum is important for the determination of the immune status. Even a previous infection though rather overt may not yield a long-lasting immunity, but may result in an antibody titer too low to prevent reinfection. Especially the screening of adolescents and young women should be a mandatory routine in prenatal care.

Product	Cat.No.	Incubation	Testprinciple (Qualitative/ Quantitative)	Standard Range	Sample Volume	Sample Dilution	Specials
Rubella IgG ELISA	EIA-3510	60/30/15	Quantitative	10-100 IU/mL	Serum/ Plasma 10 µl	1:101	
Rubella Virus IgG Avidity ELISA	EIA-5966	60/10/ 3/15	Qualitative		Serum/ Plasma 10 µl	1:101	
Rubella IgM ELISA	EIA-3511	60/30/15	Quantitative	75-300 DU/mL	Serum/ Plasma 10 µl	1:101	

SCHISTOSOMA MANSONI (BILHARZIOSIS) P

Schistosomes belong to the class of distomas (trematodes). They rank among the most frequent pathogens. Estimations originate in more than 200 million affected people. The mature parasites are 6 - 22 mm long. The most important species are Schistosoma mansoni, S. japonicum and S. haematobium. Schistosoma mansoni is common in Africa, South America and Middle East. Schistosomiasis (bilharziosis) is – depending on species and location of the parasites – a disease of the intestine, liver and spleen resp. urinary passages. Humans are (re)infected by contact with fresh water, which is contaminated by ova containing urine or faeces. If larvae bore into human skin, first a transient skin reaction appears (itch with exanthema or erythema, by repeatedly infection cercarial dermatitis is possible). After 3 - 10 weeks the meanwhile sexually mature worms synthesize cytotoxic and allergic substances which course feverish reaction in humans (Katayama fever). The infected person is mostly harmed by the eggs, which get into organs via blood excreting proteins and glycoproteins. The person reacts under participation of own antibodies and immune complexes with formation of granuloma and granulomatous proliferation in intestine and urinary bladder mucosa. Not excreted eggs die after 3 weeks and will be dissolved or calcified. The affected tissue gets fibrous.

Product	Cat.No.	Incubation	Testprinciple (Qualitative/ Quantitative)	Standard Range	Sample Volume	Sample Dilution	Specials
Schistosoma mansoni IgG ELISA	EIA-3872	60/30/15	Qualitative		Serum/ Plasma 10 µl	1:101	
Schistosoma mansoni IgM ELISA	EIA-5904	60/30/15	Qualitative		Serum/ Plasma 10 µl	1:101	

STRONGYLOIDES P

Strongyloides is a genus containing some 50 species of obligate gastrointestinal parasites of vertebrates. Strongyloides stercoralis is the scientific name of a human parasitic roundworm causing the disease of strongyloidiasis. The Strongyloides stercoralis nematode can parasitize humans. The adult parasitic stage lives in tunnels in the mucosa of the small intestine. S. stercoralis can be found in areas with tropical and subtropical climates but cases also occur in temperate area, more frequently in rural areas. S. stercoralis has a very low prevalence in societies where fecal contamination of soil or water is rare. Many people infected are usually asymptomatic at first. Symptoms include dermatitis: swelling, itching, larva currens, and mild hemorrhage at the site where the skin has been penetrated. If the parasite reaches the lungs, the chest may feel as if it is burning, and wheezing and coughing may result, along with pneumonia-like symptoms (Löffler's syndrome). The intestines could eventually be invaded, leading to burning pain, tissue damage, sepsis, and ulcers. In severe cases, edema may result in obstruction of the intestinal tract, as well as loss of peristaltic contractions. Strongyloides infection in immunocompromised individuals (particularly following the administration of steroids, for example following transplant surgery) can result in disseminated strongyloidiasis, in which worms move beyond the confines of the gut into other organs.

Product	Cat.No.	Incubation	Testprinciple (Qualitative/ Quantitative)	Standard Range	Sample Volume	Sample Dilution	Specials
Strongy-loides IgG ELISA	EIA-4208	10/5/5	Qualitative		Serum/ Plasma 5 µl	1:64	
Strongyloi-des IgG/IgM ELISA	EIA-5812	60/30/15	Qualitative		Serum/ Plasma 10 µl	1:101	

Syphilis, see Treponema pallidum

TAENIA SOLIUM (CYSTICERCOSIS) P

Taenia solium is a tapeworm of 2 m to 7 m in length, which resides in the small intestine of humans but also other animal species (monkeys, hamsters). The tapeworms produce proglottids (less than 1,000, and each with 50,000 eggs) which mature, become gravid, detach from the tapeworm, and migrate to the anus or are passed in the stool. The eggs contained in the gravid proglottids and passed with the faeces can survive for months to years in the environment. After ingestion of a suitable intermediate host (pigs and other animals, including humans) the eggs release the oncosphere, invade the intestinal wall and migrate to the striated muscles, into the brain, liver and other tissues of the host where they develop in cysticerci. In the human intestine, a cysticercus develops over 2 months into an adult tapeworm, which can survive for up to 25 years. The important parasitic infection caused by Taenia solium is cysticercosis, which may involve the eye and the central nervous system. The swine tapeworm Taenia solium is worldwide in distribution. Prevalence is higher in poorer communities where humans live in close contact with pigs and eat undercooked pork, and is very rare in Muslim countries. The main symptom of Taeniasis (only mild) is often the passage (passive) of proglottids. The most important feature of Taeniasis solium is the risk of development of Cysticercosis.

Product	Cat.No.	Incubation	Testprinciple (Qualitative/ Quantitative)	Standard Range	Sample Volume	Sample Dilution	Specials
Taenia solium IgG ELISA	EIA-3859	60/30/15	Qualitative		Serum/ Plasma 10 µl	1:101	

TETANUS (CLOSTRIDIUM TETANI) B

Clostridia are anaerobic spore-forming gram-positive bacilli whose pathogenicity depends on the release of highly destructive enzymes or powerful exotoxins. Clostridium tetani is ubiquitously present in the soil and in the faces of various animals and produces (among others) the potent neurotoxin tetanospasmin, which is released by autolysis. Hence, tetanus syndrome develops only when spores of Clostridium tetani germinate under strict anaerobic conditions after gaining access to wounds and small lacerations. Ingestion of bacteria and growth in the intestine of man or animal is without harm. Tetanospasmin is an extremely toxic agent still causing death in 50% of infected patients. In Europe, tetanus mainly occurs after injuries, and sometimes, postoperative, whereas in developing countries Tetanus neonatorum is widely disseminated causing death in up to 10% of live births. Tetanus toxin is an excellent immunogen in man - only one antigenic type of toxin. The only effective way to control tetanus is by prophylactic active immunization with formol toxoid.

Product	Cat.No.	Incubation	Testprinciple (Qualitative/ Quantitative)	Standard Range	Sample Volume	Sample Dilution	Specials
Tetanus toxin IgG ELISA	EIA-3514	60/30/15	Quantitative	0.2-1 IU/ml	Serum/ Plasma 10 µl	1:101	

TICK-BORNE ENCEPHALITIS (TBE) V

Tick-borne encephalitis (TBE) virus is a flavivirus of the family Togaviridae. It is an enveloped single-stranded RNA virus with cubic icosahedral symmetry and ranges in size from 20 - 80 nm in diameter. Three subtypes can be distinguished which show only little differences in their structural proteins. TBE virus is mainly transmitted by ticks. The degree of contamination of ticks (and thus humans) in central Europe increases from west to east, and anybody may be affected. Specific antibody development yields a life-long immunity. TBE is the most important tick-transmitted disease of man -beside Lyme disease, which is caused by the spirochete Borrelia burgdorferi. The clinical course of the disease depends on the immune status of the infected persons. A high virus production in the primary infected tissues is required for the passage of the blood-brain barrier and the resulting severe manifestations in the central nervous system.

Product	Cat.No.	Incubation	Testprinciple (Qualitative/ Quantitative)	Standard Range	Sample Volume	Sample Dilution	Specials
TBE IgG (Tick-borne Encephalitis Virus) ELISA	EIA-3860	60/30/15	Quantitative	0-300 DU/ml	Serum/ Plasma 10 µl	1:101	
TBE IgM (Tick-borne Encephalitis Virus) ELISA	EIA-3861	60/30/15	Qualitative		Serum/ Plasma 10 µl	1:101	

Infectious Diseases ELISAS

TOXOCARA CANIS P

Toxocara canis (an ascarid) is a parasitic nematode (roundworm) commonly found in the intestine of dogs. Humans are paratenic hosts who become infected by ingesting infective eggs in contaminated soil. After ingestion, the eggs yield larvae that penetrate the intestinal wall and are carried by the circulation to a wide variety of tissues (liver, heart, lungs, brain, muscle, eyes). While the larvae do not undergo any further development in these sites, they can cause several local reactions that are the basis of toxocariasis. In most cases, Toxocara infections are not serious, and many people, especially adults infected by a small number of larvae (immature worms), may not notice any symptoms. The most severe cases are rare, but are more likely to occur in young children, who often play in dirt, or eat dirt contaminated by dog stool. The two main clinical presentations of toxocariasis are Ocular Larva Migrans (OLM), an eye disease that can cause blindness (each year more than 700 people infected with Toxocara experience permanent partial loss of vision), and Visceral Larva Migrans (VLM), a disease that causes swelling of ancillary body's organs or central nervous system.

Product	Cat.No.	Incubation	Testprinciple (Qualitative/ Quantitative)	Standard Range	Sample Volume	Sample Dilution	Specials
Toxocara canis IgG ELISA	EIA-3865	60/30/15	Qualitative		Serum/ Plasma 10 µl	1:101	

TOXOPLASMA GONDII P

Toxoplasma gondii is a small intracellular parasite, whose life cycle has a sexual and an asexual phase. Sexual development is restricted to the intestinal cells of (probably exclusively) cats; the oocysts formed are excreted and due to their resistant cell walls, they may be infectious under advantageous circumstances for at least 1 year. Animals and man are intermediate hosts for the asexual proliferation of T. gondii: the ingested parasites will proliferate explosively within the host cells lysing them eventually. They disseminate throughout the body via circulation and lymphatic system and may infect any cell type. About half of the Toxoplasma infections process clinically unapparent. The other Toxoplasma infections show often only unspecific symptoms, after an incubation time from one to three weeks with lightly fever, exhaustion, headaches well as muscle and joint pain. Complications in the form of myocarditis, meningitis or pneumonia occur at 1% of infected children and young adults respectively. After recovery, Toxoplasma gondii cells persists in infected tissues by forming cysts, which are resistant to the attacks of the immune system. In immunocompetent individuals the latent infection does not reactivate. After suppression of the immune system, activation of latent infections has been observed and can lead to severe complications. An infection at any stage during pregnancy may result in the transplacental transmission of the parasite to the fetus although the timing of such a transfer does have an effect on the clinical outcome for the fetus.
1. Trimester: 17% → most often aborted, seldom severe damage to the unborn
2. Trimester: 24% → moderate or severe damage to the fetus
3. Trimester: 64% → mild damage or damage appears later in life

When maternal primary infection is detected and subsequently eradicated by chemotherapy, the risk for transmission to the fetus is decreased by about 75%. In AIDS patients, Toxoplasma encephalitis is of significant importance as the cause of death.

Product	Cat.No.	Incubation	Testprinciple (Qualitative/ Quantitative)	Standard Range	Sample Volume	Sample Dilution	Specials
Toxoplasma gondii IgA ELISA	EIA-3683	60/30/15	Qualitative		Serum/ Plasma 10 µl	1:101	
Toxoplasma gondii IgG ELISA	EIA-3519	60/30/15	Quantitative	50-200 IU/ml	Serum/ Plasma 10 µl	1:101	
Toxoplasma gondii IgG Avidity ELISA	EIA-5965	60/10/ 30/15	Qualitative		Serum/ Plasma 10 µl	1:101	
Toxoplasma gondii IgM ELISA	EIA-3520	60/30/15	Quantitative	25-100 DU/ml	Serum/ Plasma 10 µl	1:101	

TREPONEMA PALLIDUM (SYPHILIS) B

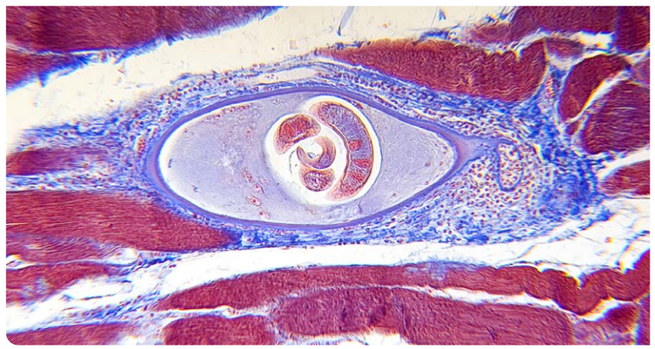
Spirochetes are motile bacteria with a periplasmatic axial filament. All pathogenic species belong to the family Treponemataceae, which includes the three genera: Treponema, Borrelia, and Leptospira. The Treponema are motile bacteria, 5-15µ in length and 0.2µ in width, containing about 10 flexible, undulating, spiral shaped rods. Treponema pallidum, the causative agent of Syphilis, is transmitted by direct contact, usually through sexual intercourse. Syphilis along with Gonorrhoea, Chancroid and Lymphogranuloma venereum, designated as a venereal disease, or VD, is an acute and chronic infectious disease. After an incubation period of 12-30 days, the first symptoms to appear are chancres, soon followed by syphilitic ulcers, which then spontaneously disappear in a few weeks. During this first stage (primary syphilis) the Treponema pallidum propagates in related lymph nodes to be distributed to the whole body stream. Three further stages of disease follow, which are classified as secondary, tertiary, and quaternary syphilis. Treatment with antibiotics at the earliest disease stage and prophylactic measures are ways to prevent epidemics. For this purpose, antenatal and donor blood screenings are mandatory in most of countries around the world.

Product	Cat.No.	Incubation	Testprinciple (Qualitative/ Quantitative)	Standard Range	Sample Volume	Sample Dilution	Specials
Treponema pallidum IgG ELISA	EIA-3517	60/30/15	Qualitative		Serum/ Plasma 10 µl	1:101	
Treponema pallidum IgM ELISA	EIA-4267	60/30/15	Qualitative		Serum/ Plasma 10 µl	1:101	
Syphilis Ab (Screening) ELISA	EIA-4405	60/30/30	Qualitative		Serum/ Plasma 100 µl		

TRICHINELLA SPIRALIS P

Trichinosis (also called trichinellosis) is caused by nematodes (roundworms) of the genus Trichinella. In addition to the classical agent Trichinella spiralis, which is found worldwide in many carnivorous and omnivorous animals, four other species (T. pseudospiralis, T. nativa, T. nelsoni, and T. britovi) are recognized. Trichinosis is acquired by ingesting meat containing cysts of Trichinella. After exposure to gastric acid and pepsin, the larvae are released from the cysts and invade the small bowel mucosa where they develop into adult worms (female 2.2 mm in length, males 1.2 mm). After 1 week, the females release larvae that migrate to the striated muscles where they encyst. Encystment is completed in 4 to 5 weeks and the encysted larvae may remain viable for several years. Ingestion of the encysted larvae perpetuates the cycle. Trichinosis infection occurs worldwide, but is most common in parts of Europe and the United States. Light infections may be asymptomatic. For mild to moderate infections, most symptoms subside within a few months whereas fatigue, weakness, and diarrhoea may last for months. In severe cases, death can occur.

Product	Cat.No.	Incubation	Testprinciple (Qualitative/ Quantitative)	Standard Range	Sample Volume	Sample Dilution	Specials
Trichinella spiralis IgG ELISA	EIA-3866	60/30/15	Qualitative		Serum/ Plasma 10 µl	1:101	



TRYPANOSOMA CRUZI (CHAGAS) P

Chagas' disease occurs in Middle and South America. It is an infectious disease transmitted to humans through the bite wound caused by an infected bug of the family reduviidae. The infection is caused by Trypanosoma cruzi a unicellular parasite. The infection passes through different phases and causes an often chronic disease. 4 to 5 million people in South America are suffering from it. People living under poor conditions are mainly jeopardized. Up to 10 % of all infections are fatal; babies and neonates have a special risk. The infection is transmitted to humans by different bug species of the family reduviidae. The parasite does not enter the human body with the bit of the bug. Trypanosoma cruzi lives in faeces of the bug and invades into humans by skin wounds. Newborns are at risk by infection in utero. An infection via blood transfusion is also possible.
1-2% of all infected people show symptoms after an incubation time of one to four weeks. Children up to 15 years old are mainly affected. The disease passes through three different phases. During acute phase fever, diarrhea, gripes, swollen lymph nodes and swelling of the whole body appears. Especially in neonates and infants inflammation of heart or brain are possible. The acute phase lasts for ca. 4 weeks. The acute Chagas disease is mostly a disease of children. In many cases the disease is healed up. The following latency period is characterized by lack of symptoms for most of the patients. Occasionally a weakening of the immune system takes place. This phase can last several years. 10 to 20 % of infected people reach the chronic phase. Different inner organs like heart, intestinal tract or neuronal system can be affected. Patients often die be sudden cardiac death or as the result of a chronic heart insufficiency. The prognosis depends upon the degree of heart variance. A variety of diagnostic methods have been used, but detection of antibodies to T. cruzi antigens remains the strongest method to diagnose infection.

Product	Cat.No.	Incubation	Testprinciple (Qualitative/ Quantitative)	Standard Range	Sample Volume	Sample Dilution	Specials
Chagas (Trypanoso-ma cruzi) IgG ELISA	EIA-5813	60/30/15	Qualitative		Serum/ Plasma 10 µl	1:101	

VARICELLA ZOSTER (VZV) V

Varicella-Zoster Virus (human herpes virus 3, HHV-3) belongs to the a-subfamily of herpesviridae. The virus particles measure about 145 nm in diameter. They consist of double stranded DNA, are surrounded by an icosahedral protein capsid and an envelope, which contains both host cells and viral components. The virus is usually transmitted in respiratory secretions, and a single serotype causes varicella (Chickenpox), a highly infectious childhood disease, and zoster (shingles), a neurodermic disease; both diseases are found worldwide. Varicella is the acute disease, which follows primary contact with the virus, whereas zoster is the response of the partially immune host to a reactivation of the varicella virus present in the body in latent form. Varicella is endemic, most commonly affected are children between 2 and 6 years of age. The course of disease is usually mild and complicated only in immunocompromised children. Rare fatal cases show multiple necrotic lesions in brain, lung (varicella pneumonia), kidneys (hemorrhagic nephritis), spleen, bone marrow, and occasionally in the intestinal tract. The lethality of varicella is below 0.1%. In the infrequent adult infections the disease is more severe, and complications are to be expected in about 5% of all cases. Zoster is of low incidence and appears with increasing frequency and severity with advancing age. Usually the process remains localized, generalization is frequently encountered in a state of immunosuppression. Fatal cases are very rare and nearly always caused by an underlying disease.

Product	Cat.No.	Incubation	Testprinciple (Qualitative/ Quantitative)	Standard Range	Sample Volume	Sample Dilution	Specials
VZV IgA ELISA	EIA-3522	60/30/15	Qualitative		Serum/ Plasma 10 µl	1:101	
VZV IgG ELISA	EIA-3523	60/30/15	Qualitative		Serum/ Plasma 10 µl	1:101	
VZV IgM ELISA	EIA-3524	60/30/15	Qualitative		Serum/ Plasma 10 µl	1:101	

YELLOW FEVER V

Yellow Fever virus is an RNA Flavivirus of the family of Flaviviridae transmitted by the mosquito "Aedes Aegypti", causing a severe infection in humans, quite often lethal if not immediately treated. Since many years, a very efficient vaccine has been available and widely used to protect people living in endemic regions and travelers. Diagnosis of YFV natural infection and follow-up of vaccination is generally obtained through detection of virus-specific IgG antibodies by means of ELISA techniques.

Product	Cat.No.	Incubation	Testprinciple (Qualitative/ Quantitative)	Standard Range	Sample Volume	Sample Dilution	Specials
Yellow Fever Virus IgG ELISA	EIA-6135	60/60/20	Qualitative		Serum/ Plasma 10 µl	1:101	

ZIKA VIRUS V

Zika Virus (ZIKV) is a single-stranded RNA virus of the Flaviviridae family (genus Flavivirus). It was first isolated in 1947 from a sentinel rhesus monkey during a yellow fever study in the Zika forest of Uganda. Since its discovery, ZIKV circulation has been detected in Africa and Asia where it has caused sporadic human infections. In 2007 its emergence on Yap Island, Micronesia was reported, marking transmission of Zika virus outside Africa and Asia. Since 2013, ZIKV has been reported from French Polynesia, New Caledonia, Cook Islands, Easter Island (Chile), Samoa and Vanuatu, and in early 2015 it spread initially to Brazil and subsequently to additional countries of the Americas. ZIKV is transmitted primarily through the bite of an infected Aedes species mosquito (A. aegypti and A. albopictus). However, there have been reports of less common transmission modes, such as blood transfusion, perinatal, and sexual contact. The incubation period of Zika virus disease is not known precisely, but is likely to be a few days. It is estimated that only one in five people infected with ZIKV develop signs or symptoms. Clinical manifestations of ZIKV infection are described as very similar to those of Dengue virus (DENV) and Chikungunya virus (CHIKV) infections, but usually milder. The most common clinical signs and symptoms are maculopapular rash, low grade fever, arthralgia, myalgia, headache and conjunctivitis. Less frequently reported are oedema, sore throat, cough, vomiting, and haematospermia. Human infections with ZIKV are usually mild and self-limiting and the symptoms usually resolve spontaneously after 3 - 7 days; arthralgia may persist for up to 1 month. In rare cases, after a Zika virus infection a Guillain-Barré syndrome (GBS), a disorder of the peripheral nerves, can probably occur. A correlation between a Zika virus infection in pregnancy and congenital brain malformations is now considered likely.

Product	Cat.No.	Incubation	Testprinciple (Qualitative/ Quantitative)	Standard Range	Sample Volume	Sample Dilution	Specials
Zika Virus IgG (capture) ELISA	EIA-5984	60/30/15	Qualitative		Serum/ Plasma 10 µl	1:101	
Zika Virus IgM µ-capture ELISA	EIA-5908	60/30/15	Qualitative		Serum/ Plasma 10 µl	1:101	

DRG PRODUCTS

FERTILITY / PREGNANCY ELISAS

17-OH Progesterone
AFP
AMH
Androstenedione
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Anti Sperm Antibody (seminal plasma)
Anti Sperm Antibody (serum)
Anti Zona Pellucida Ab
DHEA-S / DHEA
DHT
Estradiol
NEW & UNIQUE: Estriol Total
Estrone
Free Estriol
Free Testosterone
Free ß-HCG
FSH
HCG
HPL
LH (Serum & Urine)
PAPP-A
PLGF
Progesterone
Prolactin
SHBG
Testosterone
ß-HCG

DIABETES ELISAS

C-Peptide
Insulin
Leptin
Proinsulin

TUMOR DIAGNOSTIC ELISAS

CEA
Free ß HCG
TM-CA 72-4
TM-Cyfra 21-1
TM-CA 125
TM-CA 19-9
TM-CA 15-3

IRON METABOLISM ELISAS

Ferritin
Hepcidin 25 (bioactive) HS
sTfR (soluble Transferrin Receptor)

THYROID FUNCTION ELISAS

Free T3
Free T4
T3 Total
T4 Total
TSH

VETERINARY DISEASES ELISAS

CAV, Adenovirus Ab (canine)
CDV Distemper Virus IgG (canine)
CPV Parvo Virus IgG (canine)
Estrone-3-Sulfate (equine)
Fasciola hepatica (Bovine/Sheep)
Leishmania Ab (canine)
Leptospira Hardjo Ab MCA based (bovine)
PMSG Pregnant Mare Serum Gonadotropin (equine)
Rabies Virus Ab IgG (canine)
T4 total (canine)

SALIVA DIAGNOSTIC ELISAS

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