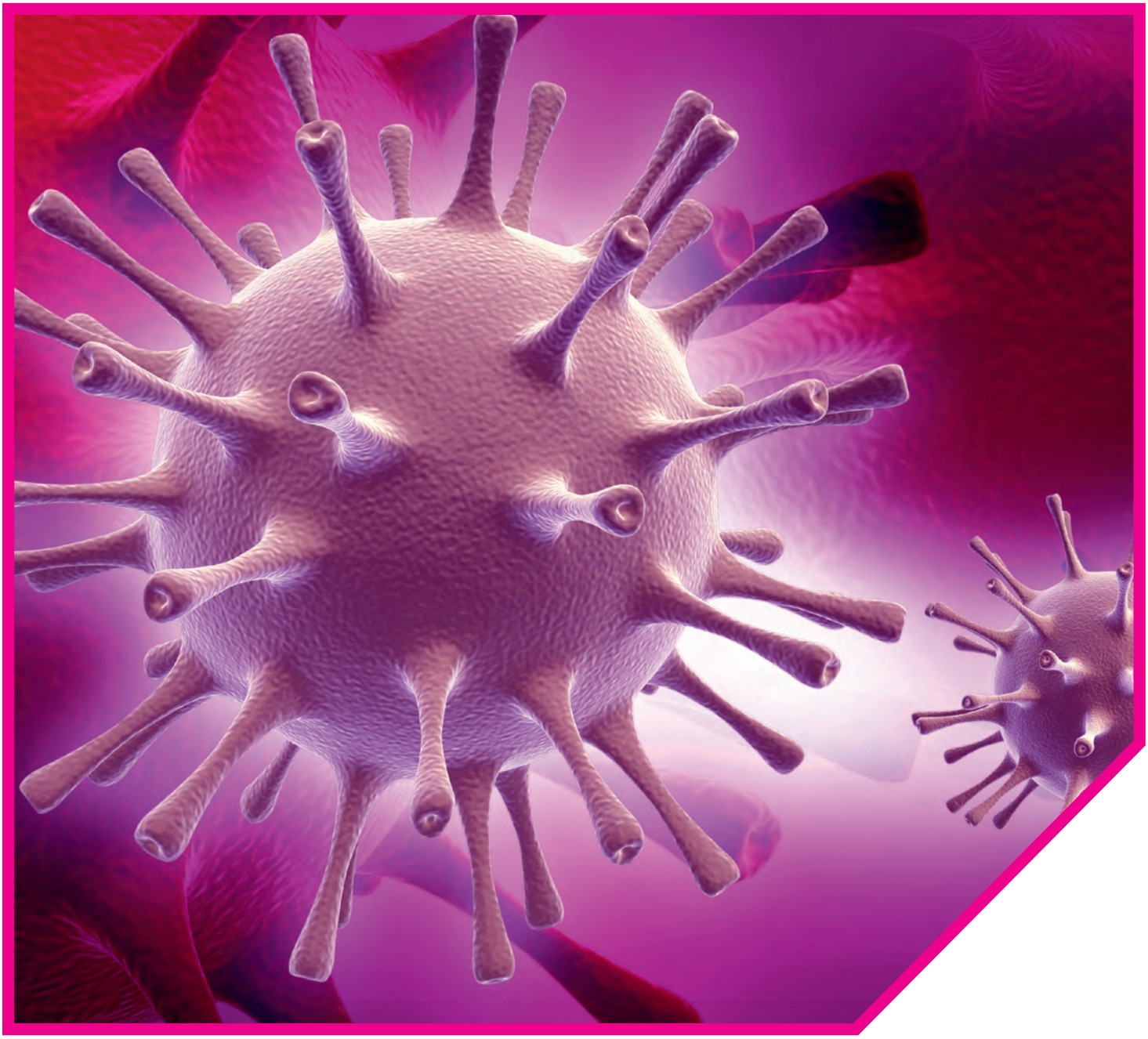

HUMAN HERPESVIRUS 6

ELISA DETECTION OF IgG AND IgM

- Diagnostics of sixth disease (exanthema subitum)
- Diagnostics of diseases associated with HHV-6

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ANTI-HHV-6 ANTIBODIES DETECTION

Differential diagnostics

- Sixth disease
- Acute fever in small children - exanthema, respiratory infection, gastroenteritis, neuroinfection, hepatitis
- Infectious mononucleosis
- Opportunistic infections in immunodeficient patients

Human herpesvirus 6 (HHV-6), a member of β-herpesviridae family, is capable of establishing life-long latency in the host organism with frequent reactivation of the infection in more than 95% of human population over the world. While the primary infection may cause a mild febrile disease in infants, known as exanthema subitum, the virus reactivations are mostly asymptomatic. Two subtypes of HHV-6 (HHV6-A and HHV6-B) has been identified, that have only 94% DNA sequence identity and differ in their biological properties. While HHV6-B is associated with human pathology both in infants and in the most of immunocompromised individuals, HHV6-A has not been yet associated with any human disease. Both HHV-6 subtypes frequently reactivate in the conditions of various acute or chronic diseases including multiple sclerosis (MS). CD4+ T-lymphocytes are the main site of the virus replication in the host. Moreover, HHV-6 (especially HHV-6A) is able to infect wide spectrum of the host cells, including other types of leucocytes (macrophages, NK cells, B-cells or pluripotent haematopoietic stem cells) and various cells in the nervous system (neurons, oligodendrocytes, astrocytes and microgliae).

Intended use and testing

ELISA-VIDITEST anti-HHV-6 IgG and IgM kits are intended for serological diagnosis of diseases associated with HHV-6 infection. The presence of IgG anti-HHV-6 antibody reveals the immune status of the patient. Significant rise in anti-HHV-6 IgG antibodies in paired serum samples, taken in acute and convalescent phase of the infection, is indicative of the active infection. The test does not differentiate between HHV-6 subtype A and B. ELISA-VIDITEST anti-HHV-6 IgG (CSF) can be used for the anti HHV-6 antibody determination in human sera and calculation of intrathecal IgG synthesis.

- Samples: serum, plasma, cerebrospinal fluid
- IgG and IgM semiquantitative data evaluation
- IgG quantitative determination uses 5 standards
- Incubations 60'/60'/10' at laboratory temperature
- CE IVD certified

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Intrathecal synthesis

Ability of HHV-6 to invade central nervous system (CNS) may be associated with neurological complications during the primary infection or the virus reactivation in immunocompromised individuals (i.e. febrile seizures or mild meningitis in infants and serious encephalitis/ encephalopathy in immunodeficient patients, associated with demyelination in the brain grey matter).

HHV-6-specific intrathecal antibody synthesis can be a marker of the virus activity in CNS, but also a bystander product of chronic CNS inflammation. It can be calculated using Reiber's equation. Intrathecal synthesis is expressed by Antibody index, which calculation requires the following data:

- Concentration of specific antibodies in serum and cerebrospinal fluid
- Total antibody concentration in serum and cerebrospinal fluid
- Concentration of albumin in serum and cerebrospinal fluid

Intrathecal synthesis (IS) interpretation

Antibodies in serum	Antibodies in cerebrospinal fluid	Antibody index	IS interpretation
negative	regardless of the result (negative, equivocal, positive)	cannot be calculated	unproven
equivocal		< 0,5	non-evaluable
		0,5 – 1,5	unproven
		1,5 - 2	equivocal
		>2	positive
positive		< 0,5	non-evaluable
		0,5 – 1,5	unproven
		1,5 - 2	equivocal
		>2	positive

HUMAN HERPESVIRUS 6

ELISA DETECTION OF IgG AND IgM

Advantages

- High sensitivity and specificity
- Semiquantitative/quantitative IgG (AU/mL) and semiquantitative IgM evaluation
- IgG determination in serum and cerebrospinal fluid
- Possibility of intrathecal IgG synthesis calculation using ELISA-VIDITEST anti-HHV-6 IgG (CSF)
- Unified incubation times for IgG and IgM
- Ready-to-use controls and HRP conjugate
- Incubation at laboratory temperature

Ordering information

Cat. no.	Product	Wells	Sensitivity/specificity
ODZ-235	ELISA-VIDITEST anti-HHV-6 IgG	96	99 % / 95 %
ODZ-344	ELISA-VIDITEST anti-HHV-6 IgG (CSF)	96	99 % / 95 %
ODZ-345	ELISA-VIDITEST anti-HHV-6 IgM	96	93 % / 94 %