



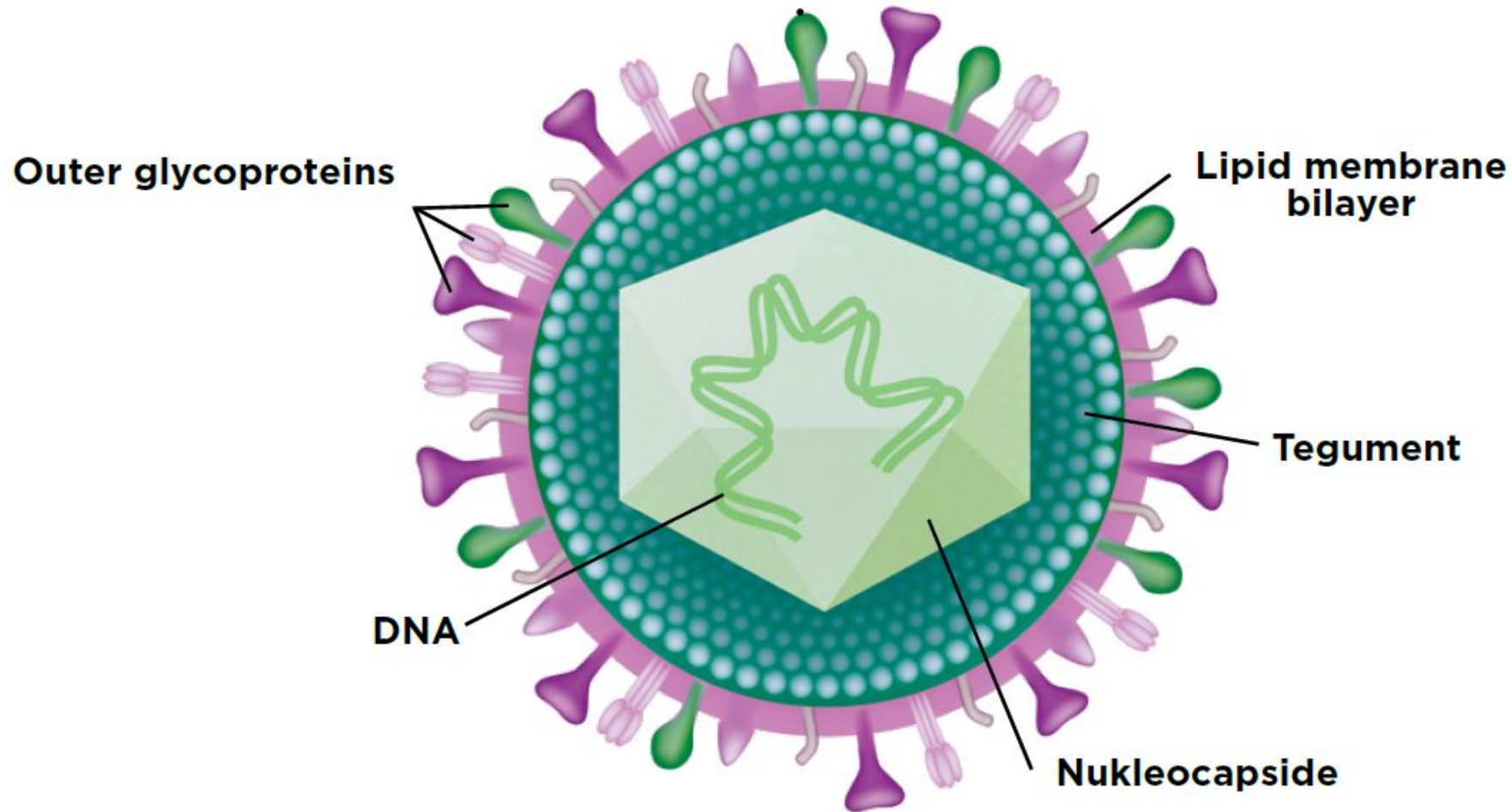
Anti-HHV-6

IgG/IgM

ELISA/MONOTEST

Human Herpesvirus 6 (HHV-6)

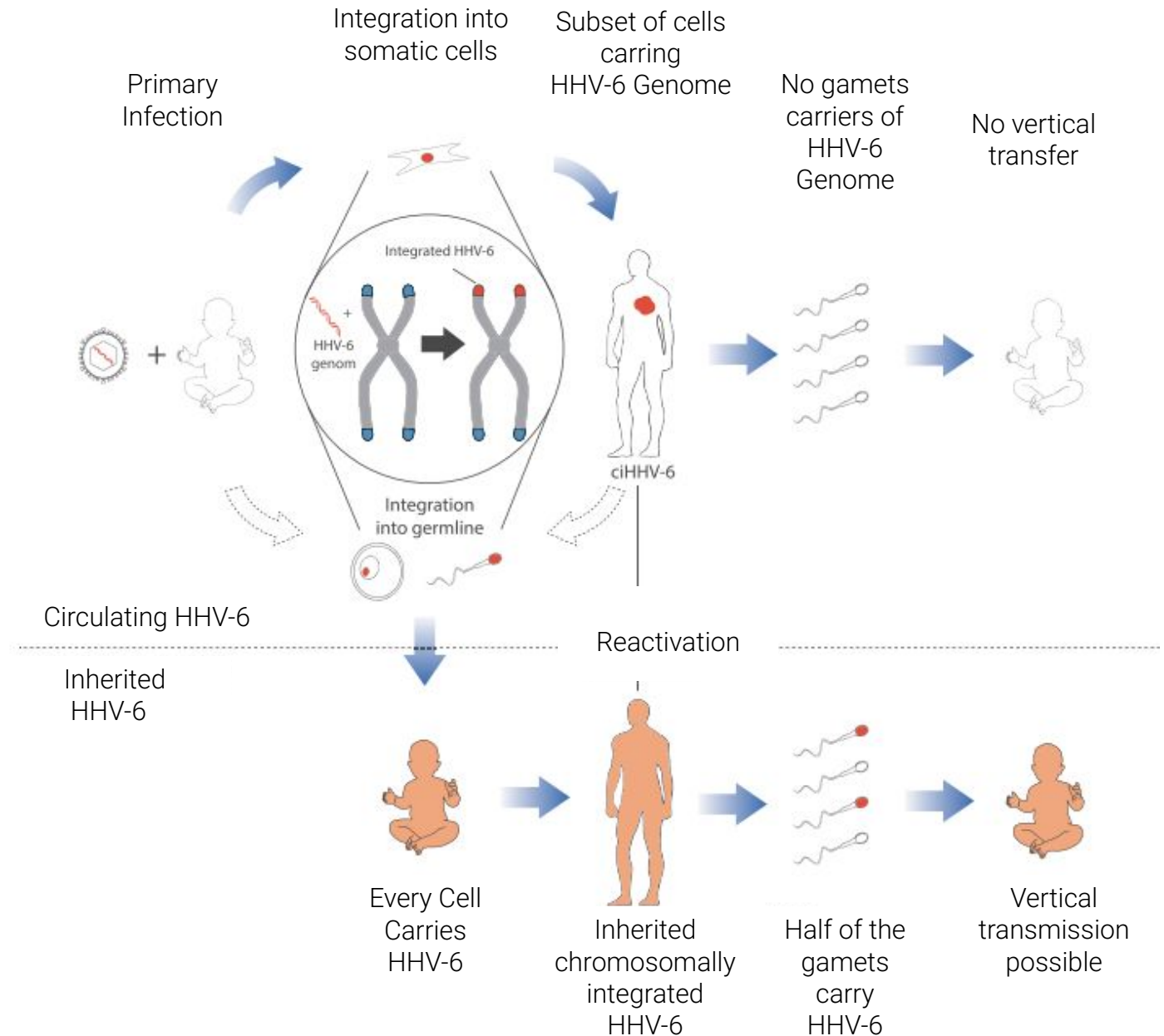
dsDNA virus from the Herpesviridae family



During primary infection, HHV-6 integrates its genome into the telomeres of a small proportion of somatic cells such as monocytes, macrophages, T cells or bone marrow progenitor cells (upper panel).

Virus maintains its genome in latently infected cells, ensures persistence in the host for life and sporadic reactivation.

HHV-6 can also integrate its genome in germ cells, while it remains unclear if this occurs during primary infection or reactivation. This resulted in offspring carrying the genome in every cell of their body



Primary infection occurs in infants, may result in **Roseola infantum (Sixth Disease)**.

Remains **latent** for life after primary infection. Usually harmless in healthy individuals.

Can **reactivate in immunocompromised patients** — especially after hematopoietic stem cell transplantation (HSCT) or solid organ transplantation (SOT) — and may lead to serious complications.

Linked to **Multiple Sclerosis**

Primary Infection
Roseola Infantum
(Sixth Disease)



Healthy Population
Latent
Secreted in saliva



Immunocompromised
Transplantation
AIDS



Microbiology

Roseola Infantum



SYMPTOMS

Most infections cause mild symptoms such as:

- Fever
- Rash
- Mild stomach or respiratory symptoms

In some cases, more severe complications can occur, including:

- Hepatitis
- Gastroenteritis or colitis
- Low platelet count (thrombocytopenia)
 - Pneumonitis
- Allograft rejection

The most serious complications involve the central nervous system, such as:

- Memory loss
- Confusion or altered mental status
 - Seizures

- In healthy children, HHV-6 is the most common cause of symptomatic infection.
- It usually causes roseola (also called exanthema subitum) — a mild illness with fever followed by a skin rash.
- Because the symptoms and rash look similar to other viral infections, HHV-6 is often misdiagnosed.
- HHV-6 has been found in infants with acute fever in some regions, including Sub-Saharan Africa.

Human Herpesvirus 6 (HHV-6)

Here are the key points in simple words:

1. HHV-6 is a double-stranded DNA virus from the Herpesviridae family (Betaherpesvirus group).
2. After the first infection, HHV-6 stays in the body for life in a “sleeping” (latent) state.
3. The virus can infect many types of cells, but it mainly infects CD4+ T-lymphocytes. It can also infect fibroblasts, endothelial cells, epithelial cells, and cells of the central nervous system (CNS).
4. HHV-6 has been found in cord blood, peripheral blood cells (PBMCs), saliva, urine, and cerebrospinal fluid (CSF).

Clinical presentation

- In healthy children, HHV-6B is the most common cause of symptomatic infection. It usually causes roseola (also called exanthema subitum) — a mild illness with fever followed by a skin rash.
- Because the symptoms and rash look similar to other viral infections, HHV-6 is often misdiagnosed.
- HHV-6A infection is less common and often has no clear symptoms, although it has been found in infants with acute fever in some regions including Sub-Saharan Africa.

Symptoms

- Most infections cause mild symptoms such as:
 - Mild stomach or respiratory symptoms
 - Fever - Rash
- In some cases, more severe complications can occur, including:
 - Hepatitis
 - Gastroenteritis or colitis
 - Low platelet count (thrombocytopenia)
 - Pneumonitis
 - Allograft rejection
- The most serious complications involve the central nervous system (CNS), such as:
 - Memory loss
 - Confusion or altered mental status
 - Seizures

Reactivation in transplant patients

HHV-6 reactivation is common after solid organ transplantation (SOT), although many cases have no clear symptoms.

In hematopoietic stem cell transplant (HSCT) recipients, 30–50% of patients experience reactivation within the first 100 days after transplant.

Reactivation may happen due to donor transmission, reinfection, or activation of the patient's own latent virus.

In T-cell depleted bone marrow transplant recipients, HHV-6 infection is linked to very high mortality rates, low lymphocyte counts, and lower 1-year survival — even with treatment.



In immunocompromised patients, particularly **hematopoietic stem cell and solid organ transplant** recipients.

Viral reactivation is associated with **significantly increased morbidity and mortality**, underscoring the critical need for vigilant monitoring and risk-stratified management in these high-risk populations.

■ Reactivation of HHV-6 in immunocompromised patients is associated with ***significantly increased morbidity and mortality***



Reactivation in Transplant Patients

- HHV-6 reactivation is common after solid organ transplantation (SOT), although many cases have no clear symptoms.
- In hematopoietic stem cell transplant (HSCT) recipients, 30–50% of patients experience reactivation within the first 100 days after transplant.
- Reactivation may happen due to donor transmission, reinfection, or activation of the patient's own latent virus.
- In T-cell depleted bone marrow transplant recipients, HHV-6 infection is linked to very high mortality rates, low lymphocyte counts, and lower 1-year survival — even with treatment.

When should HHV-6 ELISA testing be considered?

- HHV-6 ELISA testing **is recommended in cases of unexplained fever with rash in infants and young children (suspected roseola), or acute febrile illness without a clear cause.**
- In **HSCT patients, monitoring during the first 100 days post-transplant is critical**, as this is the highest-risk period for viral reactivation.
- Pre-transplant serostatus testing (IgG detection) also supports **risk assessment and patient stratification before transplantation.**
- Monitor HHV-6 specific antibodies **in Multiple Sclerosis patients to predict disease activity during therapeutic management.**
- May be used in transplant recipients presenting with post-transplant fever, neurological symptoms such as confusion, seizures or memory loss, unexplained cytopenia (e.g., thrombocytopenia), hepatitis, colitis, pneumonitis, graft dysfunction, or suspected rejection.

VIDIA PROVIDES THE ONLY HHV-6 ELISA SOLUTION



IgG



IgM

VIDIA PROVIDES THE ONLY HHV-6 MONOTEST SOLUTION



IgG



IgM

Why does HHV-6 ELISA matter?

- IgM detection supports recent or active infection/reactivation
- IgG detection indicates past exposure
- Helps differentiate acute vs. latent infection
- Supports clinical decision-making in high-risk patients



HHV-6 ELISA – VIDITEST & MONO-VIDITEST

- ✓ VIDIA is the only worldwide producer of certified HHV-6 immunoenzymatic kits
 - ✓ Semiquantitative detection of IgG and IgM antibodies in serum
 - ✓ Qualitative option for detection of IgG antibodies in serum
 - ✓ Quantitative detection of IgG in CSF
 - ✓ Suitable for manual and automated workflows
 - ✓ Available in two formats: ELISA and MONOTEST

Reliable diagnostics. Flexible workflow. Focused on clinical needs.

Summary

1. Human Herpesvirus 6 (HHV-6) infects most people early in life, with about 95% of adults worldwide exposed. After the primary infection, the virus remains latent in the body for life.
2. In individuals with weakened immune systems—particularly after hematopoietic stem cell transplantation (HSCT) or solid organ transplantation (SOT)—HHV-6 can reactivate and cause serious disease.
3. Reactivation in immunocompromised patients is associated with significantly increased morbidity and mortality, highlighting the importance of monitoring and risk-based management.
4. While most infections are mild, HHV-6 can lead to severe complications such as hepatitis, pneumonitis, thrombocytopenia, colitis, allograft rejection, and neurological symptoms including confusion, seizures, and memory loss.
5. Up to 30–50% of HSCT recipients experience HHV-6 reactivation within the first 100 days after transplant, making this period critical for monitoring.
6. ELISA testing helps detect and differentiate HHV-6 IgM (recent/active infection) and IgG (past exposure).
7. VIDIA is THE ONLY company that provides certified anti-HHV-6 IgM and IgG ELISA kits and MONOTESTs for clinical diagnostic use.



THE WAY TO THE CORRECT RESULTS...