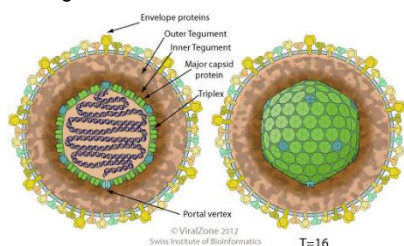


□ Cat # RP-636

Recombinant (E.Coli) Herpes Simplex Virus-1 gG (HSV-1 gG)

Size: □ 100 ug

Herpes has been known for at least 2,000 years. Herpes simplex (creeping or latent) is a viral disease caused by the herpes simplex virus (HSV). Infections are categorized based on the part of the body infected. **Oral herpes** involves the face or mouth. It may result in small **blisters** in groups often called **cold sores** or fever blisters or may just cause a sore throat. **Genital herpes**, often simply known as herpes, may have minimal symptoms or form blisters that break open and result in small ulcers. Other disorders caused by herpes simplex include: **herpetic whitlow** when it involves the **fingers**, **herpes of the eye**, **herpes infection of the brain**, and **neonatal herpes** when it affects a newborn, among others.



There are two types of herpes simplex virus, type 1 (HSV-1) and type 2 (HSV-2). HSV-1 more commonly causes **oral infections** while HSV-2 more commonly causes

genital infections. Oral and genital herpes is usually diagnosed based on the presenting symptoms. The diagnosis may be confirmed by viral culture or detecting herpes DNA in fluid from blisters. Testing the blood for antibodies against the virus can confirm a previous infection but will be negative in new infections. Worldwide rates of either HSV-1 or HSV-2 are between 60% and 95% in adults. In HSV-1-infected individuals, seroconversion after an oral infection prevents additional HSV-1 infections such as whitlow, genital herpes, and herpes of the eye. No method eradicates herpes virus from the body, but antiviral medications can reduce the frequency, duration, and severity of outbreaks.

HSV contains a large dsDNA (~150 kb) encased within an icosahedral protein cage called the **capsid**, which is wrapped in a lipid bilayer called the **envelope**. The envelope is joined to the capsid by means of a **tegument**. This complete particle is known as the **virion**. HSV-1 and HSV-2 each contain at least 74 genes. These genes encode a variety of proteins involved in forming the capsid, tegument and envelope of the virus, as well as controlling the replication and infectivity of the virus. HSV genome contain two unique regions called the long unique region (**UL**) and the short unique region (**US**). Of the 74 known ORFs, UL contains 56 viral genes, whereas US contains only 12. The herpes simplex 1 genomes can be classified into six clades. Four of these occur in East Africa, one in East Asia and one in Europe and North America. There are three temporal classes of genes: immediate-early (alpha), early (beta) and late (gamma). The immediate-early genes are transcribed immediately after infection to take control of cell defense and to activate early genes. These encode the proteins necessary for the viral DNA replication. The **late genes** mostly encode structural proteins. Latent genes can stop the replicative process at the early step. Attachment of the viral **gB**, **gC**, **gD** and **gH** proteins to host receptors mediates endocytosis of the virus into the host cell.

FORMS & SOURCE:

The recombinant protein is produced in E.coli and purified by chromatographic technique. It contains the HSV-1 gG immunodominant regions, 84-175 amino acids and fused to a GST-Tag at C-terminus. The protein is >95% pure and supplied in buffer 25mM Tris-HCl pH 7.2, 1mM EDTA, and 50% glycerol. (see lot specific conc. on the vial).

STORAGE & STABILITY:

Protein is shipped at ambient temperature. Upon arrival, Store at -20°C. 1 year frozen. One month in solution at room temperature. If supplied in lyophilized form, then reconstitute it in water for 1mg/mL stock and store in liquid at 4°C for ~ 1week or aliquots in suitable size and store at -20°C for long term storage.

Specificity: The recombinant protein is immunoreactive with sera of HSV-infected individuals.

References: Straface G (2012 Infectious Diseases in Obstetrics and Gynecology 2012: 1–6.; Schiffer JT (2014). J R Soc Interface 11 (95): 20140160; Johnston C (2011). J Clin Invest 121 (12): 4600–9. Sperling RS (2008) Sex Transm Dis 35 (3): 286–90.

**This product is for in vitro research use only.*

Catalog#	Prod Description
RP-632	Recombinant (E.Coli) Herpes Simplex Virus-1 gD (HSV-1 gD)
RP-633	Recombinant (E.Coli) Herpes Simplex Virus-1 gD
RP-634	Recombinant (E.Coli) Herpes Simplex Virus-2 gD (HSV-2 gD)
RP-635	Recombinant (E.Coli) Herpes Simplex Virus-2 gG (HSV-1 gG)
RP-636	Recombinant (E.Coli) Herpes Simplex Virus-1 gG
RP-637	Recombinant (E.Coli) Herpes Simplex Virus-8 Mosaic

RP-636-Herpesimplex-1-virus 160729SV