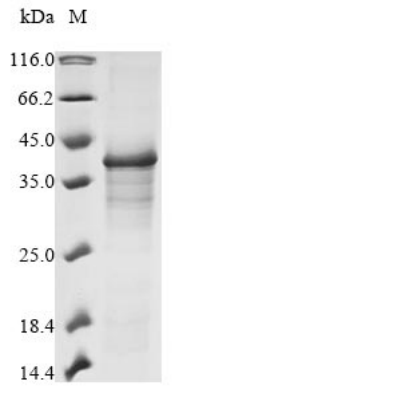
Recombinant Varicella-zoster virus Envelope glycoprotein H (gH), partial

Product Code	CSB-EP357614VAP
Abbreviation	Recombinant Varicella-zoster virus gH protein, partial
Storage	The shelf life is related to many factors, storage state, buffer ingredients, storage temperature and the stability of the protein itself. Generally, the shelf life of liquid form is 6 months at -20°C/-80°C. The shelf life of lyophilized form is 12 months at -20°C/-80°C.
Uniprot No.	P09260
Form	Liquid or Lyophilized powder
Storage Buffer	If the delivery form is liquid, the default storage buffer is Tris/PBS-based buffer, 5%-50% glycerol. If the delivery form is lyophilized powder, the buffer before lyophilization is Tris/PBS-based buffer, 6% Trehalose.
Product Type	Recombinant Protein
Immunogen Species	Varicella-zoster virus (strain Dumas) (HHV-3) (Human herpesvirus 3)
Purity	Greater than 85% as determined by SDS-PAGE.
Sequence	NKSYVTPTPATRSIGHMSALLREYSDRNMSLKLEAFYPTGFDEELIKSLHWGN DRKHVFLVIVKVNPTTHEGDVGLVIFPKYLLSPYHFKAEHRAPFPAGRFGFLSH PVTPDVSFFDSSFAPYLTTQHLVAFTTFPPNPLVWHLERAETAATAERPFGVS LLPARPTVPKNTILEHKAHFATWDALARHTFFSAEAIITNSTLRIHVPLFGSVWPI RYWATGSVLLTSDSGRVEVNIGVGFMSSLISLSSGPPIELIVVPHTVKLNAVTSD TTWFQLNPPGPDPGPSYRVYLLGRGLDMN
Research Area	Signal Transduction
Source	E.coli
Target Names	gH
Expression Region	18-317aa
Notes	Repeated freezing and thawing is not recommended. Store working aliquots at 4°C for up to one week.
Tag Info	N-terminal 10xHis-tagged and C-terminal Myc-tagged
Mol. Weight	40.8 kDa
Protein Length	Partial
Image	



(Tris-Glycine gel) Discontinuous SDS-PAGE (reduced) with 5% enrichment gel and 15% separation gel.

Description

To produce recombinant Varicella-zoster virus Envelope glycoprotein H (gH) in E. coli, the gene of interest (18-317aa of HHV-3 gH) is co-cloned into an expression vector with an N-terminal 10xHis-tag and C-terminal Myc-tag gene and transformed into E. coli cells. The bacteria are cultured under conditions that induce protein expression. After reaching sufficient growth, the cells are lysed to release the recombinant protein. The harvested proteins undergo affinity chromatography purification. The purity of the HHV-3 gH protein is confirmed using SDS-PAGE, exceeding 85%.

Varicella-zoster virus glycoprotein H (gH) is a 118-kDa type I transmembrane protein with a large ectodomain and a short cytoplasmic tail [1]. It is recognized as the major neutralization target of the Varicella-zoster virus, with a conformational neutralizing epitope [2]. Studies have shown that gH, along with glycoproteins gE and gB, is incorporated into the Varicella-zoster virus virion envelope [3]. The cytoplasmic tails of these glycoproteins contain functional motifs that mediate endocytosis [1][3]. Varicella-zoster virus glycoprotein H plays a significant role in viral entry, replication, and pathogenesis [4].

References:
[1] T. Pasieka, L. Marešová, & C. Grose, A functional ynki motif in the short cytoplasmic tail of varicella-zoster virus glycoprotein gh mediates clathrin-dependent and antibody-independent endocytosis, Journal of Virology, vol. 77, no. 7, p. 4191-4204, 2003. https://doi.org/10.1128/jvi.77.7.4191-4204.2003
[2] Y. Akahori, K. Suzuki, T. Daikoku, M. Iwai, Y. Yoshida, Y. Asanoet al., Characterization of neutralizing epitopes of varicella-zoster virus glycoprotein h, Journal of Virology, vol. 83, no. 4, p. 2020-2024, 2009. https://doi.org/10.1128/jvi.02097-08
[3] L. Marešová, T. Pasieka, E. Homan, E. Gerday, & C. Grose, Incorporation of three endocytosed varicella-zoster virus glycoproteins, ge, gh, and gb, into the virion envelope, Journal of Virology, vol. 79, no. 2, p. 997-1007, 2005. https://doi.org/10.1128/jvi.79.2.997-1007.2005
[4] B. Berarducci, M. Sommer, L. Zerboni, J. Rajamani, & A. Arvin, Cellular and viral factors regulate the varicella-zoster virus ge promoter during viral replication, Journal of Virology, vol. 81, no. 19, p. 10258-10267, 2007. https://doi.org/10.1128/jvi.00553-07

Reconstitution

We recommend that this vial be briefly centrifuged prior to opening to bring the

	contents to the bottom. Please reconstitute protein in deionized sterile water to a concentration of 0.1-1.0 mg/mL.We recommend to add 5-50% of glycerol (final concentration) and aliquot for long-term storage at -20°C/-80°C. Our default final concentration of glycerol is 50%. Customers could use it as reference.
Shelf Life	The shelf life is related to many factors, storage state, buffer ingredients, storage temperature and the stability of the protein itself. Generally, the shelf life of liquid form is 6 months at -20°C/-80°C. The shelf life of lyophilized form is 12 months at -20°C/-80°C.