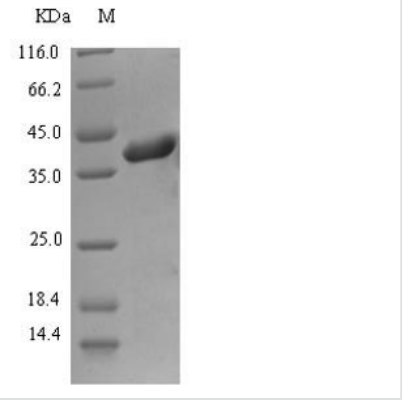
Recombinant Epstein-Barr virus Envelope glycoprotein H (gH), partial

Product Code	CSB-EP365883EFA
Relevance	The heterodimer glycoprotein H-glycoprotein L is required for the fusion of viral and plasma membranes leading to virus entry into the host cell. Membrane fusion is mediated by the fusion machinery composed at least of gB and the heterodimer gH/gL. Fusion of EBV with B-lymphocytes requires the additional receptor-binding protein gp42, which forms a complex with gH/gL. May also be required for virus attachment to epithelial cells.
Abbreviation	Recombinant Epstein-Barr 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.	P03231
Alias	Glycoprotein 85 Short name:gp85
Product Type	Recombinant Protein
Immunogen Species	Epstein-Barr virus (strain B95-8) (HHV-4) (Human herpesvirus 4)
Purity	Greater than 90% as determined by SDS-PAGE.
Sequence	SLSEVKLHLDIEGHASHYTIPWTELMAKVPGLSPEALWREANVTEDLASMLNR YKLIYKTSGTLGIALAEPVDIPAVSEGSMQVDASKVHPGVISGLNSPACMLSAP LEKQLFYYIGTMLPNTRPHSYVFYQLRCHLSYVALSINGDKFQYTGAMTSKFL MGTYKRVTEKGDEHVLSLVFGKTKDLPDLRGPFSYPSLTS
Research Area	Others
Source	E.coli
Target Names	gH
Expression Region	19-218aa
Notes	Repeated freezing and thawing is not recommended. Store working aliquots at 4°C for up to one week.
Tag Info	N-terminal 6xHis-SUMO-tagged
Mol. Weight	38.1kDa
Protein Length	Partial
Image	



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

Description

Recombinant Epstein-Barr virus Envelope glycoprotein H (gH) is produced in E. coli with an expression region spanning amino acids 19 to 218. This partial protein carries an N-terminal 6xHis-SUMO tag for improved solubility and purification. The product reaches purity levels above 90%, as confirmed by SDS-PAGE, which appears to make it suitable for various experimental applications. This protein is intended for research use only.

Epstein-Barr virus Envelope glycoprotein H (gH) represents a crucial component of the viral envelope. It plays what seems to be a significant role in the fusion process during viral entry into host cells. The protein interacts with other glycoproteins to enable membrane fusion—a process that's essential for viral infection. Understanding gH function and structure may prove important in virology research, particularly for studies examining viral entry mechanisms and potential therapeutic interventions.

Potential Applications

Note: The applications listed below are based on what we know about this protein's biological functions, published research, and experience from experts in the field. However, we haven't fully tested all of these applications ourselves yet. We'd recommend running some preliminary tests first to make sure they work for your specific research goals.

1. Antibody Development and Characterization

This recombinant EBV gH fragment (aa 19-218) can serve as an immunogen for generating monoclonal or polyclonal antibodies specific to envelope glycoprotein H. The N-terminal His-SUMO tag helps with purification and immobilization for immunization protocols and subsequent antibody screening assays. Researchers might use this protein in ELISA-based screening to identify antibodies with high specificity and affinity to the gH protein. The purified protein also works well in Western blot validation and epitope mapping studies to characterize binding properties of generated antibodies.

2. Protein-Protein Interaction Studies

The His-SUMO tagged gH fragment works in pull-down assays to identify cellular proteins that interact with EBV envelope glycoprotein H during viral entry

or membrane fusion processes. The His tag allows immobilization on nickel-affinity resins, while the high purity (>90%) appears to ensure reliable interaction data with minimal background binding. This application seems particularly valuable for mapping the molecular mechanisms of EBV-host cell interactions and identifying potential cellular receptors or co-factors involved in viral entry pathways.

3. Structural and Biochemical Characterization

This recombinant gH fragment provides what appears to be a stable platform for biophysical studies. These might include circular dichroism spectroscopy, dynamic light scattering, and analytical ultracentrifugation to characterize protein folding and stability. The defined expression region (aa 19-218) represents a specific domain that can be analyzed for secondary structure content and thermal stability profiles. Researchers can perform comparative studies with different buffer conditions or in the presence of potential binding partners to understand the biochemical properties of this envelope protein domain.

4. ELISA-Based Binding Assays

The His-SUMO tagged gH protein can be directly coated onto ELISA plates or captured via anti-His antibodies for developing quantitative binding assays. This setup may enable screening of small molecule libraries, peptide inhibitors, or other proteins for their binding affinity to the gH envelope protein. The high purity and consistent protein preparation likely help create reproducible dose-response curves and kinetic binding studies that are essential for understanding molecular interactions with EBV envelope components.

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.