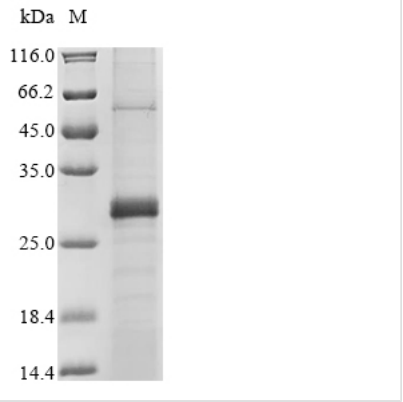
Recombinant Lassa virus Pre-glycoprotein polyprotein GP complex (GPC)

Product Code	CSB-CF322925LCP
Abbreviation	Recombinant Lassa virus GPC 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.	P17332
Storage Buffer	Lyophilized from Tris/PBS-based buffer, 6% Trehalose
Product Type	Transmembrane Proteins
Immunogen Species	Lassa virus (strain GA391) (LASV)
Purity	Greater than 85% as determined by SDS-PAGE.
Sequence	GTFTWTLSDSEGNETPGGYCLTRWMLIEAELKCFGNTAVAKCNEKHDEEFCD MLRLFDFNKQAIRRLKTEAQMSIQLINKAVNALINDQLIMKNHLRDIMGIPYCNY SRYWYLNHTSTGKTSLPRCWLISNGSYLNETKFSDDIEQQADNMITEMLQKEY IDRQGKTPLGLVDLFVFSTSFYLISIFLHLVKIPTHRHIVGKPCPKPHRLNHMGIC SCGLYKQPGVPVRWKR
Research Area	Signal Transduction
Source	in vitro E.coli expression system
Target Names	GPC
Protein Names	Recommended name: Pre-glycoprotein polyprotein GP complex Short name= Pre-GP-C Cleaved into the following 3 chains: 1. Stable signal peptide Short name= 2. SSP 3. Glycoprotein G1 Short name= 4. GP1 5. Glycoprotein G2
Expression Region	259-490aa
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
Mol. Weight	29.7 kDa
Protein Length	Partial
Image	



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

Description

The Recombinant Lassa virus Pre-glycoprotein polyprotein GP complex (GPC) is produced using an in vitro E.coli expression system, covering the amino acid region 259-490. This partial protein is N-terminally tagged with 10xHis, which appears to make purification and detection more straightforward. The product achieves a purity level greater than 85% as determined by SDS-PAGE, ensuring reliable use in research applications. This product is intended for research use only.

The Lassa virus Pre-glycoprotein polyprotein GP complex (GPC) seems to play a crucial role in the viral life cycle. It's involved in the maturation and function of the viral envelope glycoproteins - proteins that are essential for virus entry into host cells. This makes the GPC a potentially important target for understanding viral pathogenesis and investigating 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 Epitope Mapping Studies

This recombinant GPC fragment (259-490aa) may work well as an immunogen for generating monoclonal or polyclonal antibodies against Lassa virus glycoprotein complex. The N-terminal 10xHis tag allows for purification and immobilization when screening hybridoma supernatants or serum samples. Researchers might use this protein fragment to map linear epitopes within the 259-490 amino acid region of the glycoprotein complex. The high purity (>85%) suggests minimal cross-reactivity is likely during antibody characterization studies.

2. Protein-Protein Interaction Studies

The His-tagged GPC fragment can be used in pull-down assays to identify host cell proteins that interact with this specific region of the Lassa virus glycoprotein complex. The 10xHis tag makes immobilization on nickel-affinity matrices

possible, potentially capturing binding partners from cell lysates. This application could help reveal molecular mechanisms of viral entry or host cell responses, though results would need careful validation. Co-immunoprecipitation experiments using anti-His antibodies might further confirm identified interactions.

3. ELISA-Based Binding Assays

The recombinant protein can be coated onto ELISA plates to develop binding assays for studying interactions with potential receptor proteins or other viral components. The His tag may help with oriented immobilization using anti-His antibodies or nickel-coated plates, which should provide more consistent protein presentation. Researchers could use this system to screen compound libraries for molecules that disrupt protein interactions or to characterize binding kinetics with known partners. The defined amino acid region (259-490) allows for structure-activity relationship studies within this specific domain.

4. Biochemical Characterization and Structural Studies

This purified GPC fragment appears suitable for biochemical analyses including mass spectrometry, circular dichroism spectroscopy, and limited proteolysis studies. The high purity level should enable accurate determination of protein stability, folding characteristics, and post-translational modifications within the 259-490 amino acid region. Researchers can perform thermal stability assays and analyze secondary structure content of this specific glycoprotein domain. The His tag provides a convenient anchor point for protein immobilization during various analytical procedures.

Shelf Life

The shelf life is related to many factors, storage state, buffer ingredients, storage temperature and the stability of the protein itself.
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