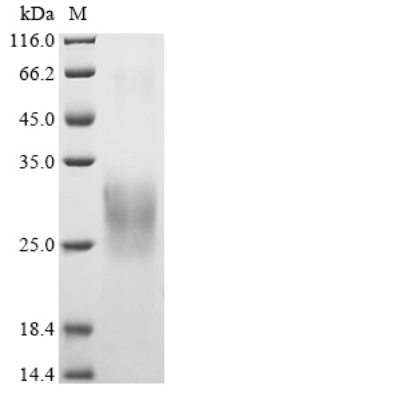
Recombinant Variola virus A27L protein (A27L)

Product Code	CSB-MP2678VAR
Abbreviation	Recombinant Variola virus A27L protein
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.	Q89694
Storage Buffer	Tris-based buffer,50% glycerol
Product Type	Recombinant Proteins
Immunogen Species	Variola virus (isolate Human/India/Ind3/1967) (VARV) (Smallpox virus)
Purity	Greater than 90% as determined by SDS-PAGE.
Sequence	MEKEIQRLRDRIMDLDRQLNECKRNGNGTSSEEVNRLKTRISDLKQSLEICLKD KSELYSAYKTELGRVREQISNLQESLRRERESDKTDSYYRRELTRERNKIVELE KELNKCFDVNHVKYIDEINSKKNRISDLERQLTACKSNGCGNGDMDQYKREIE SLKRELTKCRRGSNGSHSDCEYYDEEARDCVKS
Research Area	Others
Source	Mammalian cell
Target Names	A27L
Expression Region	1-194aa
Notes	Repeated freezing and thawing is not recommended. Store working aliquots at 4°C for up to one week.
Tag Info	N-terminal 6xHis-Myc-tagged
Mol. Weight	27.1 kDa
Protein Length	Full Length

Image



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

Description

Recombinant Variola virus A27L protein gets expressed in a mammalian cell

system, which helps ensure proper folding and post-translational modifications. The protein covers the full length—amino acids 1 to 194—and includes an N-terminal 6xHis-Myc tag to make purification and detection simpler. SDS-PAGE analysis shows purity levels above 85%, suggesting this product should work well for different research applications.

A27L appears to be a structural component of the Variola virus. Research indicates it plays a role in mediating viral entry and cell-to-cell transmission. The protein seems to interact with other viral proteins to help with virus assembly and egress. Given its apparently critical function in the viral life cycle, A27L has become an important target for studies looking into viral pathogenesis and antiviral strategy development.

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 Immunological Studies

This recombinant A27L protein may serve as an immunogen for creating polyclonal or monoclonal antibodies specific to the variola virus A27L protein. The mammalian expression system likely preserves native epitopes through proper protein folding and post-translational modifications. That N-terminal His-Myc tag makes purification and detection more straightforward during antibody screening. These antibodies could prove valuable as research tools for studying poxvirus biology and developing detection methods for variola virus research in authorized laboratories.

2. Protein-Protein Interaction Studies

Researchers can use the His-tagged A27L protein in pull-down assays to identify potential cellular or viral binding partners. The His tag allows immobilization on nickel-affinity matrices, which helps capture interacting proteins from cell lysates or purified protein libraries. That 85% purity level appears sufficient for interaction studies. The mammalian expression system likely helps maintain native protein conformation—something that's necessary for physiologically relevant binding interactions. Such studies might provide insights into the molecular mechanisms behind variola virus pathogenesis and host-pathogen interactions.

3. ELISA-Based Binding Assays

The dual His-Myc tagging system makes this protein well-suited for sandwich ELISA formats or direct binding assays. Scientists can immobilize the protein via the His tag or detect it using anti-Myc antibodies, which provides flexibility in assay design. The mammalian expression system and adequate purity level should support reliable and reproducible binding measurements. These assays

could help screen for small molecule inhibitors, study protein stability under various conditions, or investigate binding kinetics with potential interaction partners.

4. Biochemical Characterization Studies

This recombinant A27L protein works well for basic biochemical analyses—thermal stability studies, pH tolerance assays, and buffer optimization experiments. The protein's purity level of greater than 85% appears adequate for spectroscopic analyses like circular dichroism to study secondary structure or dynamic light scattering for oligomerization studies. The mammalian expression system likely provides a more native-like protein compared to bacterial systems. This makes it valuable for understanding the biophysical properties of the A27L protein under various experimental conditions.

Shelf Life

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