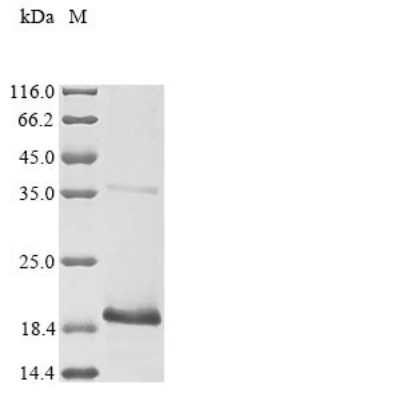
Recombinant Human papillomavirus type 6a protein E4 (E4)

Product Code	CSB-EP772797HOM
Abbreviation	Recombinant Human papillomavirus type 6a E4 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.	Q84295
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	Human papillomavirus type 6a
Purity	Greater than 85% as determined by SDS-PAGE.
Sequence	MADDSALHKKYPFLNLLHTPPHRPPPLCPQAPRKTQCKRRLENEHEESNSHL ATPCVWPTLDPWTVETTTSSLTITTSTKEGTTVTVQLRL
Research Area	Others
Source	E.coli
Target Names	E4
Expression Region	1-91aa
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	17.7 kDa
Protein Length	Full Length
Image	



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

Description

Recombinant Human papillomavirus type 6a protein E4 is expressed in E. coli and consists of the full-length protein with an expression region from 1 to 91 amino acids. This product features an N-terminal 10xHis-tag and a C-terminal Myc-tag, which streamlines purification and detection processes. SDS-PAGE analysis indicates a purity level greater than 85%, making it suitable for research applications where high-quality protein is essential.

The E4 protein from Human papillomavirus type 6a appears to play a crucial role in the viral life cycle, particularly in regulating viral replication and modulating cell cycle progression. Research suggests it's significant for understanding viral mechanisms and pathogenesis. Scientists often examine this protein to gain insights into the complex interactions between viral and host cellular components. Studies indicate E4 may be involved in viral assembly and release, which likely contributes to its importance in virology research.

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. In Vitro Protein-Protein Interaction Studies

This dual-tagged HPV6a E4 protein works well in pull-down assays to identify and characterize cellular proteins that interact with E4 during viral infection processes. The N-terminal His-tag allows for immobilization on nickel-affinity matrices. Meanwhile, the C-terminal Myc-tag enables detection and validation of interactions through Western blotting or immunofluorescence. Such studies could provide insights into how HPV6a E4 modulates host cell functions and contributes to viral pathogenesis mechanisms.

2. Antibody Development and Validation

The recombinant E4 protein serves as an ideal antigen for generating specific antibodies against HPV6a E4 in research applications. The dual-tag system allows for precise monitoring of protein integrity and concentration during

immunization protocols and subsequent antibody screening processes. Generated antibodies could be validated using the Myc-tag for specificity confirmation. Researchers can then apply these antibodies in various immunoassays to study E4 expression patterns in experimental systems.

3. Biochemical Characterization and Structural Studies

This purified E4 protein can be used for detailed biochemical analysis including determination of protein stability, folding properties, and potential enzymatic activities under controlled laboratory conditions. The high purity level (>85%) makes it suitable for biophysical techniques such as circular dichroism spectroscopy, dynamic light scattering, or analytical ultracentrifugation to characterize its structural properties. The His-tag simplifies protein purification for these analyses while the Myc-tag enables tracking during experimental procedures.

4. ELISA-Based Quantitative Assays

The dual-tagged E4 protein can serve as both a standard and control in enzyme-linked immunosorbent assays designed to quantify E4 protein levels in experimental samples. The Myc-tag enables capture or detection in sandwich ELISA formats, while the His-tag provides an alternative binding mechanism for assay development. This application appears particularly valuable for researchers studying viral protein expression kinetics or screening for compounds that affect E4 protein levels in cell culture systems.

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.