Data Sheet (Cat.No.TMPH-01839)

Human Papilloma Virus type 6a (HPV 6a) Protein E4 (His & Myc)

General Information

Synonyms: E4;Protein E4

Protein Construction: 1-91 aa

Species: HPV 6a

Expression Host: E. coli

Accession: Q84295

Molecular Weight: 17.7 kDa (predicted)

AA Sequence: MADDSALHKKYPFLNLLHTPPHRPPPLCPQAPRKTQCKRRLENEHEESNSHLATPCVWPTLDPWTVETTTSS LTITTSTKEGTTVTVQLRL

QC Testing

Biological Activity: Activity has not been tested. It is theoretically active, but we cannot guarantee it. If you require protein activity, we recommend choosing the eukaryotic expression version first.

Purity: > 85% as determined by SDS-PAGE.

Endotoxin: < 1.0 EU/μg of the protein as determined by the LAL method.

Formulation: 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, pH 8.0.

Preparation and Storage

Reconstitution:

Reconstitute the lyophilized protein in sterile deionized water. The product concentration should not be less than 100 μg/mL. Before opening, centrifuge the tube to collect powder at the bottom. After adding the reconstitution buffer, avoid vortexing or pipetting for mixing.

Stability & Storage:

Lyophilized powders can be stably stored for over 12 months, while liquid products can be stored for 6-12 months at -80°C. For reconstituted protein solutions, the solution can be stored at -20°C to -80°C for at least 3 months. Please avoid multiple freeze-thaw cycles and store products in aliquots.

Actual storage temperature shall be subject to the COA.

Shipping:

In general, lyophilized powders are shipped with blue ice, while solutions are shipped with dry ice.

Protein Background

Contributes to multiple aspects of the viral life cycle including viral genome amplification, suppression of suprabasal cell differentiation and egress of newly formed virions. Induces host cell cycle arrest at the G2 phase by associating with and preventing the nuclear entry of host CDK1/cyclin B1 complexes. Inhibits cellular DNA

replication by preventing loading of host replication licensing proteins MCM2 and MCM7 onto chromatin. Within the cytoplasm, associates with host kinase SRPK1, a splicing factor regulator, and inhibits its activity. Therefore, E4 favors expression of late viral transcripts by inhibiting SRPK1-mediated phosphorylation of host serine-arginine (SR) proteins that have critical roles in mRNA metabolism. Late in the infectious cycle, E4 also acts to diminish the integrity of the keratinocyte by disrupting the keratin cytoskeleton and inducing apoptosis through alteration of mitochondrial function to facilitate egress of the newly formed virions.

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