Data Sheet (Cat.No.TMPY-02060)

TargetMol

Human Enterovirus 71 VP0 Protein (His & GST)

General Information

Synonyms:	VP Protein;VP4-VP2 Protein
Protein Construction:	A DNA sequence encoding the amino acids (Met 1-Gln 323) of human enterovirus 71 genome polyprotein (Q66478-1), corresponding to the protein VP0 precusor, a component of immature procapsids, was fused with the N-terminal polyhistidine tag followed by a GST tag Predicted N terminal: Met
Species:	EV71
Expression Host:	Baculovirus Insect Cells
Accession:	Q66478-1
Molecular Weight:	63 kDa (predicted); 58 kDa (reducing conditions)

QC Testing

Biological Activity:	Activity testing is in progress. It is theoretically active, but we cannot guarantee it. If you require protein activity, we recommend choosing the eukaryotic expression version first.
Purity:	≥ 80 % as determined by SDS-PAGE
Endotoxin:	< 1.0 EU/μg of the protein as determined by the LAL method.
Formulation:	Lyophilized from a solution filtered through a 0.22 μm filter, containing 50 mM Tris, 100 mM NaCl, 2 mM GSH, 0.5 mM PMSF, pH 8.0.Typically, a mixture containing 5% to 8% trehalose, mannitol, and 0.01% Tween 80 is incorporated as a protective agent before lyophilization.

Preparation and Storage

Reconstitution:

A Certificate of Analysis (CoA) containing reconstitution instructions is included with the products. Please refer to the CoA for detailed information.

Stability & Storage:

It is recommended to store recombinant proteins at -20°C to -80°C for future use. 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

Human enterovirus 71 genome polyprotein is a member of the picornaviruses polyprotein family. It contains two peptidase C3 domains, one RdRp catalytic domain, one SF3 helicase domain. Genome polyprotein is cleaved into the following 12 chains: Protein VP (VP4-VP2), Protein VP4 (P1A), Protein VP2 (P1B), Protein VP3 (P1C), Protein VP1

(P1D), Picornain 2A (P2A), Protein 2B (P2B), Protein 2C (P2C), Protein 3A (P3A), Protein 3B (P3B), Picornain 3C (Protease 3C) and RNA-directed RNA polymerase 3D-POL (P3D-POL). VP precursor is a component of immature procapsids. Capsid proteins VP1, VP2, VP3 and VP4 form a closed capsid enclosing the viral positive strand RNA genome. VP4 lies on the inner surface of the protein shell formed by VP1, VP2 and VP3. All the three latter proteins contain a beta-sheet structure called beta-barrel jelly roll. Together they form an icosahedral capsid composed of 6 copies of each VP1, VP2, and VP3, with a diameter of approximately 3 Angstroms. VP1 is situated at the 12 fivefold axes, whereas VP2 and VP3 are located at the quasi-sixfold axes.

Reference

Brown B.A., et al., 1995, Virus Res. 39:195-206.
Tang W.-F. et al., 2007, J. Biol. Chem. 282:5888-5898.
Huang,S.C. et al., 2008, Virus Res. 131 (2):250-9.