Data Sheet (Cat.No.TMPH-00201)

TargetMol

BK polyomavirus (BKPyV) VP2 Protein (His)

General Information

Synonyms: Minor structural protein VP2;Minor capsid protein VP2

Protein Construction: 2-351 aa

Species: BKPyV

Expression Host: E. coli

Accession: P03094

Molecular Weight: 41.7 kDa (predicted)

AA Sequence: GAALALLGDLVASVSEAAAATGFSVAEIAAGEAAAAIEVQIASLATVEGITSTSEAIAAIGLTPQTYAVIAGAPG AIAGFAALIQTVSGISSLAQVGYRFFSDWDHKVSTVGLYQQSGMALELFNPDEYYDILFPGVNTFVNNIQYLD PRHWGPSLFATISQALWHVIRDDIPSITSQELQRRTERFFRDSLARFLEETTWTIVNAPINFYNYIQQYYSDLSPI RPSMVRQVAEREGTRVHFGHTYSIDDADSIEEVTQRMDLRNQQSVHSGEFIEKTIAPGGANQRTAPQWMLPL LLGLYGTVTPALEAYEDGPNQKKRRVSRGSSQKAKGTRASAKTTNKRRSRSSRS

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: Tris-based buffer, 50% glycerol

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:

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

Isoform VP2 is a structural protein that resides within the core of the capsid surrounded by 72 VP1 pentamers. Participates in host cell receptor binding together with VP1. Following virus endocytosis and trafficking to the endoplasmic reticulum, VP2 and VP3 form oligomers and integrate into the endoplasmic reticulum membrane.

Heterooligomer VP2-VP3 may create a viroporin for transporting the viral genome across the endoplasmic reticulum membrane to the cytoplasm. Nuclear entry of the viral DNA involves the selective exposure and importin recognition of VP2 or Vp3 nuclear localization signal (shared C-terminus). Plays a role in virion assembly within the nucleus in particular through a DNA-binding domain located in the C-terminal region. A N-terminal myristoylation suggests a scaffold function for virion assembly.; structural protein that resides within the core of the capsid surrounded by 72 VP1 pentamers. Following virus endocytosis and trafficking to the endoplasmic reticulum, VP2 and VP3 form oligomers and integrate into the endoplasmic reticulum membrane. Heterooligomer VP2-VP3 may create a viroporin for transporting the viral genome across the endoplasmic reticulum membrane to the cytoplasm. Nuclear entry of the viral DNA involves the selective exposure and importin recognition of VP2 or Vp3 nuclear localization signal (shared C-terminus). Isoform VP3 plays a role in virion assembly within the nucleus. May participate in host cell lysis when associated with VP4.; Isoform VP4 is a viroporin inducing perforation of cellular membranes to trigger virus progeny release. Forms pores of 3 nm inner diameter. VP4 is expressed about 24 hours after the late structural proteins and is not incorporated into the mature virion.

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