Data Sheet (Cat.No.TMPH-01519)

TargetMol

HIV-1 (group M, subtype C, isolate 92BR025) Protein Vpr (His & Myc)

General Information

Synonyms: Protein Vpr;vpr;Viral protein R;R ORF protein

Protein Construction: 1-96 aa

Species: HIV-1

Expression Host: E. coli

Accession: O12160

Molecular Weight: 18.9 kDa (predicted)

AA Sequence: MEQAPEDQGPQREPYNEWTLELLEELKREAVRHFPRPWLHGLGQHIYETYGDTWTGVEAIIRILQRLLFVHFRI GCQHSRIGILRQRRARNGASRS

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

During virus replication, may deplete host UNG protein, and incude G2-M cell cycle arrest. Acts by targeting specific host proteins for degradation by the 26S proteasome, through association with the cellular CUL4A-DDB1 E3 ligase complex by direct interaction with host VPRPB/DCAF-1. Cell cycle arrest reportedly occurs within hours of

infection and is not blocked by antiviral agents, suggesting that it is initiated by the VPR carried into the virion. Additionally, VPR induces apoptosis in a cell cycle dependent manner suggesting that these two effects are mechanistically linked. Detected in the serum and cerebrospinal fluid of AIDS patient, VPR may also induce cell death to bystander cells.; During virus entry, plays a role in the transport of the viral pre-integration (PIC) complex to the host nucleus. This function is crucial for viral infection of non-dividing macrophages. May act directly at the nuclear pore complex, by binding nucleoporins phenylalanine-glycine (FG)-repeat regions.

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