Data Sheet (Cat.No.TMPH-02384)

TargetMol

Lake Victoria marburgvirus (MARV) (strain Popp-67) L Protein (His & Myc)

General Information

Synonyms:	Protein L;Large structural protein;Replicase;Transcriptase;RNA-directed RNA polymerase L
Protein Construction:	628-812 aa
Species:	MARV
Expression Host:	E. coli
Accession:	P35262
Molecular Weight:	28.7 kDa (predicted)
AA Sequence:	RGASFVTDLEKYNLAFRYEFTRHFIDYCNRCYGVKNLFDWMHFLIPLCYMHVSDFYSPPHCVTEDNRNNPPD CANAYHYHLGGIEGLQQKLWTCISCAQITLVELKTKLKLKSSVMGDNQCITTLSLFPIDAPDDYQENEAELNAA RVAVELAITTGYDGIFLKPEETFVHSGFIYFGKKQYLNG

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:	> 90% 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

RNA-directed RNA polymerase that catalyzes the transcription of viral mRNAs, their capping and polyadenylation. The template is composed of the viral RNA tightly encapsidated by the nucleoprotein (N). The viral polymerase

binds to the genomic RNA at the 3' leader promoter, and transcribes subsequently all viral mRNAs with a decreasing efficiency. The first gene is the most transcribed, and the last the least transcribed. The viral phosphoprotein acts as a processivity factor. Capping is concommitant with initiation of mRNA transcription. Indeed, a GDP polyribonucleotidyl transferase (PRNTase) adds the cap structure when the nascent RNA chain length has reached few nucleotides. Ribose 2'-O methylation of viral mRNA cap precedes and facilitates subsequent guanine-N-7 methylation, both activities being carried by the viral polymerase. Polyadenylation of mRNAs occur by a stuttering mechanism at a slipery stop site present at the end viral genes. After finishing transcription of a mRNA, the polymerase can resume transcription of the downstream gene.; RNA-directed RNA polymerase that catalyzes the replication of viral genomic RNA. The template is composed of the viral RNA tightly encapsidated by the nucleoprotein (N). The replicase mode is dependent on intracellular N protein concentration. In this mode, the polymerase replicates the whole viral genome without recognizing transcriptional signals, and the replicated genome is not caped or polyadenylated.