

## Rabies virus (RABV) (strain SAD B19) Matrix Protein (His)

### General Information

Synonyms: NP;Nucleoprotein;Nucleocapsid protein (Protein N)

Protein Construction: 1-450 aa

Species: RABV

Expression Host: E. coli

Accession: P16285

Molecular Weight: 54.7 kDa (predicted)

MDADKIVFKVNNQVVSLKPEIIVDQYEQYKYPKDLKKPCITLGKAPDLNKAYKSVLSGMSAAKLNPDVCSY  
LAAAMQFFEGTCEPDWTSYGIVIAKGDKITPGSLVEIKRDTVEGNWALTGGMELTRDPTVPEHASLVGLLSL  
YRLSKISGQNTGNYKTNIADRIEQIFETAPFVKIVEHHTLMTTHKMCANWSTIPNFRFLAGTYDMFFSRIEHLYS  
AIRVGTVVVTAYEDCSGLVSFTGFIKQINLTAREAILYFFHKNFEEIIRRMFEPGQETAVPHSYFIHFRSLGLSGKS  
PYSSNAVGHVFNLIHFVGCYMGQVRSLNATVIAACAPHEMSVLGGYLGEEFFGKGTFFERRFFRDEKELQEYEA  
AELTKTDVALADDGTVNSDDEDYFSGETRSPYVYTRIMMNGGRLKRSHIRRYVSVSSNHQARPNSFAEFLN  
KTYSSDS

AA Sequence:

### 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

Encapsidates the genome in a ratio of one protein N per nine ribonucleotides, protecting it from nucleases. If expressed without protein P it binds non-specifically RNA and therefore can bind its own mRNA. Interaction with protein P abolishes any non-specific RNA binding, and prevents phosphorylation. The soluble N-P complex encapsidates specifically the genomic RNA, with protein N protecting the genome like a pearl necklace. The encapsidated genomic RNA is termed the nucleocapsid (NC) and serves as template for viral transcription and replication. Protein N binds protein P in the NC through a different interaction, and can be phosphorylated. Subsequent viral replication is dependent on intracellular concentration of newly synthesized protein N. During replication, encapsidation by protein N is coupled to RNA synthesis and all replicative products are resistant to nucleases.

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