

Munc18-1/STXBP1 Protein, Human, Recombinant

General Information

Synonyms:	N-Sec1;DEE4;unc-18A;unc18-1;RBSEC1;hUNC18;P67;NSEC1;MUNC18-1;UNC18A;UNC18
Protein Construction:	A DNA sequence encoding the Human STXBP1 (P61764-1) (Met1-Ser594) was expressed.
Species:	Human
Expression Host:	Baculovirus Insect Cells
Accession:	P61764-1
Molecular Weight:	67.73 kDa (predicted); 62.5 kDa (reducing condition, due to glycosylation)

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:	≥ 85% as determined by SDS-PAGE.
Endotoxin:	< 1.0 EU/μg of the protein as determined by the LAL method.
Formulation:	Lyophilized from sterile 20 mM Tris, 500 mM NaCl, 10% Glycerol, pH 8.0. Please contact us for any concerns or special requirements. Normally 5% - 8% trehalose, mannitol and 0.01% Tween 80 are added as protectants before lyophilization. Please refer to the specific buffer information in the hardcopy of datasheet or the lot-specific COA.

Preparation and Storage

Reconstitution:

Please refer to the lot-specific COA.

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

Syntaxin-binding protein 1, also known as N-Sec1, Protein unc-18 homolog 1, MUNC18-1 and STXBP1, is a peripheral membrane protein that belongs to the STXBP / unc-18 / SEC1 family. STXBP1 is an evolutionarily conserved neuronal Sec1/Munc-18 (SM) protein that is essential in synaptic vesicle release in several species. It may participate in the regulation of synaptic vesicle docking and fusion, possibly through interaction with GTP-binding proteins. STXBP1 is essential for neurotransmission and binds syntaxin, a component of the synaptic

vesicle fusion machinery probably in a 1:1 ratio. It can interact with syntaxins 1, 2, and 3 but not syntaxin 4. STXBP1 may also play a role in determining the specificity of intracellular fusion reactions. Defects in STXBP1 are the cause of epileptic encephalopathy early infantile type 4 (EIEE4). Affected individuals have neonatal or infantile onset of seizures, suppression-burst pattern on EEG, profound mental retardation, and MRI evidence of hypomyelination.

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