

Human STXBP1 / UNC18A Protein (His & GST Tag)

Catalog Number: 11751-H20B



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General Information

Gene Name Synonym:

MUNC18-1; NSEC1; P67; RBSEC1; UNC18; AI317162; AI326233; MMS10-G; Ms10g; Munc-18a; Munc18-1; N-sec1; nsec1; Rb-sec1; Sxtbp1; Unc18-1; Unc18h

Protein Construction:

A DNA sequence encoding the human STXBP1 isoform 1 (P61764-1) (Met 1-Ser 594) was fused with the N-terminal polyhistidine-tagged GST tag at the N-terminus.

Source: Human

Expression Host: Baculovirus-Insect Cells

QC Testing

Purity: > 93 % as determined by SDS-PAGE

Endotoxin:

< 1.0 EU per µg of the protein as determined by the LAL method

Stability:

Samples are stable for up to twelve months from date of receipt at -70 °C

Predicted N terminal: Met

Molecular Mass:

The recombinant human STXBP1/GST chimera consists of 831 amino acids and has a calculated molecular mass of 95.4 kDa. It migrates as an approximately 80 kDa band in SDS-PAGE under reducing conditions.

Formulation:

Lyophilized from sterile 20mM Tris, 500mM NaCl, 0.5mM PMSF, 10% gly, pH 8.0

Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween80 are added as protectants before lyophilization. Specific concentrations are included in the hardcopy of COA. Please contact us for any concerns or special requirements.

Usage Guide

Storage:

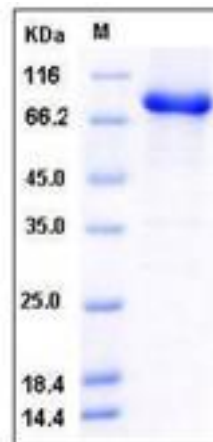
Store it under sterile conditions at -20°C to -80°C upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

Avoid repeated freeze-thaw cycles.

Reconstitution:

Detailed reconstitution instructions are sent along with the products.

SDS-PAGE:



Protein Description

Syntaxin-binding protein 1, also known as N-Sec1, Protein unc-18 homolog 1, MUNC18-1 and STXBP1, is a peripheral membrane protein which belongs to the STXBP / unc-18 / SEC1 family. STXBP1 is an evolutionally 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.

References

1. Gengyo-Ando K., et al., 1996, J. Neurosci. 16: 6695-6702.
2. Swanson D.A., et al., 1998, Genomics 48: 373-376.
3. The MGC Project Team. 2004, Genome Res. 14: 2121-2127.

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