Mouse SPG21 / ACP33 Protein (His & GST Tag)

Catalog Number: **50783-M20B**

General Information

Gene Name Synonym:

ACP33; BM-019; C78576; D9Wsu18e; GL010; MAST

Protein Construction:

A DNA sequence encoding the mouse SPG21 isoform 1 (Q9CQC8-1) (Met 1-Pro 308) was fused with the N-terminal polyhistidine-tagged GST tag at the N-terminus.

Source: Mouse

Expression Host: Baculovirus-Insect Cells

QC Testing

Purity: > 90 % 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 ℃

Predicted N terminal: Met

Molecular Mass:

The secreted recombinant mouse SPG21/GST chimera consists of 545 amino acids and has a calculated molecular mass of 62.8kDa. The recombinant protein migrates as an approximately 52 kDa band in SDS-PAGE under reducing conditions.

Formulation:

Lyophilized from sterile 20mM Tris, 500mM NaCl, pH 7.4, 3mM DTT, 10% glycerol

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:

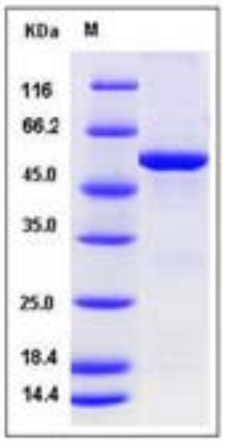
Store it under sterile conditions at -20℃ to -80℃ upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

Avoid repeated freeze-thaw cycles.

Reconstitution:

Detailed reconstitution instructions are sent along with the products.

SDS-PAGE:



Protein Description

Spastic paraplegia 21 (SPG21), also known as acid Cluster Protein 33 (ACP33) and Mast syndrome protein, is a member of the AB hydrolase superfamily. Human SPG21 is a 308 amino acid residue protein widely expressed in all tissues, including heart, brain, placenta, lung, liver, skeletal muscle, kidney and pancreas. SPG21 binds to the hydrophobic C-terminal amino acids of CD4 which are involved in repression of T cell activation via the noncatalytic alpha/beta hydrolase fold domain. SPG21 thus is proposed to play a role as a negative regulatory factor in CD4-dependent T-cell activation of CD4. Defects in SPG21 are the cause of spastic paraplegia autosomal recessive type 21, also known as Mast syndrome, a neurodegenerative disorder characterized by a slow, gradual, progressive weakness and spasticity of the lower limbs. Rate of progression and the severity of symptoms are quite variable. SPG21 is also associated with dementia and other central nervous system abnormalities.

References

1.Zeitlmann L. et al., 2001, J Biol Chem. 276: 9123-32. 2.Simpson M. A. et al., 2003, Am J Hum Genet. 73: 1147-156. 3.Ota T. et al., 2004, Nat. Genet.36: 40-45.