# **PRODUCT INFORMATION**

**Expression system** E.coli

**Domain** 1-308aa

UniProt No. Q9NZD8

NCBI Accession No. NP\_057714

### **Alternative Names**

Spastic paraplegia 21 isoform a, ACP33, BM-019, GL010, Maspardin, MAST, Spastic paraplegia 21 isoform a Acid cluster protein 33, BM019, Spastic paraplegia 21 autosomal recessive Mast syndrome protein, SPG21.

# **PRODUCT SPECIFICATION**

### **Molecular Weight**

37.1 kDa (328aa) confirmed by MALDI-TOF

**Concentration** 1mg/ml (determined by Bradford assay)

**Formulation** Liquid in. 20mM Tris-HCl buffer (pH 8.0)

**Purity** > 95% by SDS-PAGE

**Endotoxin level** < 1 EU per 1ug of protein (determined by LAL method)

**Tag** His-Tag

Application SDS-PAGE

### **Storage Condition**

Can be stored at +2C to +8C for 1 week. For long term storage, aliquot and store at -20C to -80C. Avoid repeated freezing and thawing cycles.

# BACKGROUND

## Description

Spastic paraplegia 21 (SPG21), also known as Maspardin, binds to the hydrophobic C-terminal amino acids of CD4 and may play a role as a negative regulatory factor in CD4-depenent T-cell activation. This protein is widely expressed in various tissues including heart, brain, placenta, lung, liver, skeletal muscle, kidney and pancreas.



Mutations in SPG21 cause Mast syndrome, an autosomal-recessive complicated form of hereditary spastic paraplegia characterized by dementia, thin corpus callosum and white matter abnormalities. Recombinant human SPG21 protein, fused to His-tag at N-terminus, was expressed in E. coli and purified by using conventional chromatography.

### Amino acid Sequence

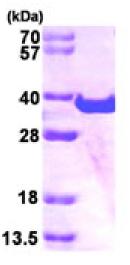
MGSSHHHHHH SSGLVPRGSH MGEIKVSPDY NWFRGTVPLK KIIVDDDDSK IWSLYDAGPR SIRCPLIFLP PVSGTADVFF RQILALTGWG YRVIALQYPV YWDHLEFCDG FRKLLDHLQL DKVHLFGASL GGFLAQKFAE YTHKSPRVHS LILCNSFSDT SIFNQTWTAN SFWLMPAFML KKIVLGNFSS GPVDPMMADA IDFMVDRLES LGQSELASRL TLNCQNSYVE PHKIRDIPVT IMDVFDQSAL STEAKEEMYK LYPNARRAHL KTGGNFPYLC RSAEVNLYVQ IHLLQFHGTK YAAIDPSMVS AEELEVQKGS LGISQEEQ

### **General References**

Simpson MA., et al. (2003). Am J Hum Genet. 73(5):1147-56. Zeitlmann L., et al. (2001). J Biol Chem. 276(12):9123-32.

## DATA





3ug by SDS-PAGE under reducing condition and visualized by coomassie blue stain.

15% SDS-PAGE (3ug)