# Recombinant Mouse SPG21 Protein (His &GST Tag)

**Catalog Number: PKSM040487**

**Note:** *Centrifuge before opening to ensure complete recovery of vial contents.*

## Description

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|---|---|
| **Species** | Mouse |
| **Source** | Baculovirus-Insect Cells-derived Mouse SPG21 protein Met 1-Pro 308, with an N-terminal His & GST |
| **Calculated MW** | 62.8 kDa |
| **Observed MW** | 52 kDa |
| **Accession** | Q9CQC8-1 |
| **Bio-activity** | Not validated for activity |

## Properties

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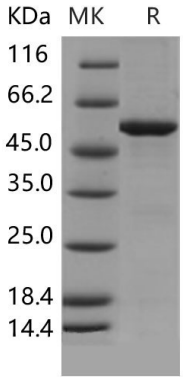
|---|---|
| **Purity** | > 90 % as determined by reducing SDS-PAGE. |
| **Endotoxin** | < 1.0 EU per μg of the protein as determined by the LAL method. |
| **Storage** | Generally, lyophilized proteins are stable for up to 12 months when stored at -20 to -80 ℃. Reconstituted protein solution can be stored at 4-8℃ for 2-7 days. Aliquots of reconstituted samples are stable at < -20℃ for 3 months. |
| **Shipping** | This product is provided as lyophilized powder which is shipped with ice packs. |
| **Formulation** | Lyophilized from sterile 20mM Tris, 500mM NaCl, pH 7.4, 3mM DTT, 10% glycerol 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 printed manual. |
| **Reconstitution** | Please refer to the printed manual for detailed information. |

## Data




> 90 % as determined by reducing SDS-PAGE.

## Background

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.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