Mouse SIRPB1A / SIRP beta 1 Protein (His Tag)

Catalog Number: **50816-M08H**

General Information

Gene Name Synonym:

9930027N05Rik; SIRP-beta; Sirpb; Sirpb1

Protein Construction:

A DNA sequence encoding the mouse SIRPB1A (BAD26610.1) (Met 1-Lys 363) was expressed, with a C-terminal polyhistidine tag.

Source: Mouse

Expression Host: HEK293 Cells

QC Testing

Purity: > 98 % 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: Ala 27

Molecular Mass:

The secreted recombinant mouse SIRPB1A comprises 348 amino acids and has a calculated molecular mass of 39.1 kDa. As a result of glycosylation, the apparent molecular mass of the recombinant protein is approximately 55-60 kDa in SDS-PAGE under reducing conditions.

Formulation:

Lyophilized from sterile PBS, pH 7.4

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:

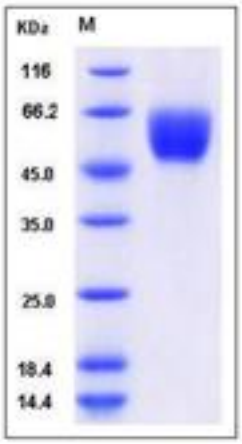
Store it under sterile conditions at -20℃ to -80℃ upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

Avoid repeated freeze-thaw cycles.

Reconstitution:

Detailed reconstitution instructions are sent along with the products.

SDS-PAGE:



Protein Description

SIRPB1A (Signal-regulatory protein beta 1A), also known as SIRP beta 1, belongs to signal-regulatory-protein (SIRP) family, and immunoglobulin superfamily. Signal-regulatory proteins (SIRPs) are cell-surface glycoproteins expressed on myeloid and neural cells that have been shown to recruit SH2 domain-containing protein phosphatase 1 (SHP-1) and SHP-2 and to regulate receptor tyrosine kinase-coupled signaling. SIRP are classified as SIRP alpha molecules, containing a 110- to 113-amino acid long, or SIRP beta molecules, with a 5-amino acid long intracytoplasmic domain. SIRP beta 1 is a new DAP12-associated receptor involved in the activation of myeloid cells, which contains a short cytoplasmic domain that lacks sequence motifs capable of recruiting SHP-1 and SHP-2. SIRP beta 1. SIRP beta 1 acts as an activating isoform of SIRP alpha molecules, confirming the co-existence of inhibitory ITIM-bearing molecules, recruiting SHP-1 and SHP-2 protein tyrosine phosphatases, and activating counterparts, whose engagement couples to protein tyrosine kinases via ITAM-bearing molecules.

References

1.Gaikwad S, *et al.* (2009) Signal regulatory protein-beta1: a microglial modulator of phagocytosis in Alzheimer's disease. Am J Pathol. 175(6): 2528-39. 2.Dietrich J, *et al.* (2000) Cutting edge: signal-regulatory protein beta 1 is a DAP12-associated activating receptor expressed in myeloid cells. J Immunol. 164(1): 9-12. 3.Tomasello E, *et al.* (2000) Association of signal-regulatory proteins beta with KARAP/DAP-12. Eur J Immunol. 30(8): 2147-56.