

Human OSTM1 Protein (His Tag)

Catalog Number: 10913-H08H



Sino Biological Inc.

Biological Solution Specialist

General Information

Gene Name Synonym:

GIPN; GL; HSPC019; OPTB5; 1200002H13Rik; gl; HSPC019

Protein Construction:

A DNA sequence encoding the extracellular domain of human OSTM1 (NP_054747.2) (Met 1-Pro 284) was expressed, fused with a C-terminal polyhistidine tag.

Source: Human

Expression Host: Human Cells

QC Testing

Purity: > 97 % 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: Ala 32

Molecular Mass:

The recombinant human OSTM1 comprises 264 amino acids and has a calculated molecular mass of 29.7 kDa. As a result of glycosylation, the recombinant protein migrates as an approximately 40-50 kDa protein 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:

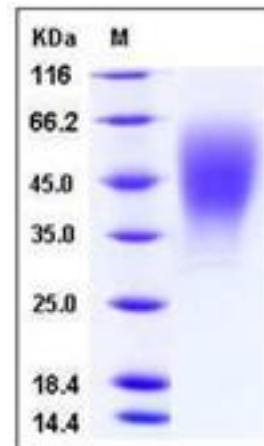
Store it under sterile conditions at -20°C to -80°C upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

Avoid repeated freeze-thaw cycles.

Reconstitution:

Detailed reconstitution instructions are sent along with the products.

SDS-PAGE:



Protein Description

Osteopetrosis-associated transmembrane protein 1 (OSTM1) is a Single-pass type I membrane protein. It is expressed in many hematopoietic cells of the myeloid and lymphoid B- and T-lineages. The analysis of OSTM1 association with CLCN7 demonstrated that OSTM1 requires CLCN7 to localize to lysosomes, whereas the formation of a CLCN7-OSTM1 complex is required to stabilize CLCN7. The researches found that OSTM1 plays a major role in myelopoiesis and lymphopoiesis and provided evidence of a crosstalk mechanism between hematopoietic cells for osteoclast activation. Thus, OSTM1 has a important role in osteoclast function and activation. The loss of function of OSTM1 results in deregulation of multiple hematopoietic lineages in addition to osteoclast lineage, OSTM1-defect patients display the most severe recessive osteopetrotic phenotype and die at early ages. Furthermore, it is suggested that OSTM1 has a primary role in neural development not related to lysosomal dysfunction. The canonical Wnt/beta-catenin signaling pathway may be a molecular basis for OSTM1 mutations and severe autosomal recessive osteopetrosis (ARO).

References

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2. Quarello, P. et al., 2004, J Bone Miner Res. 19 (7): 1194-1199.
3. Lange, PF. et al., 2006, Nature. 440 (7081): 220-223
4. Maranda, B. et al., 2008, J Bone Miner Res. 23 (2): 296-300.
5. Feigin, ME. et al., 2008, Cell Signal. 20 (5): 949-957.
6. Pata, M. et al., 2008, J Biol Chem. 283 (45): 30522-30530.

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