

Recombinant Mouse OSTM1 Protein, His-tagged

Cat. No. Ostm1-511M **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant Mouse Ostm1 (NP_766004.1) (Met1-Ser288) was expressed with a polyhistidine tag at the C-terminus.
Species	Mouse
Source	HEK293
ProteinLength	Met1-Ser288
Description	Osteopetrosis-associated centigradeiated 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 associated centigradeiation with CLCN7 demonstrated that OSTM1 requires CLCN7 to internalize and centigradealize 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 an 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).

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Predicted N Terminal	Ala 35
Form	Lyophilized from sterile PBS, pH 7.4. Normally 5 %- 8 % trehalose, mannitol and 0.01% Tween80 are added as protectants before lyophilization.
Molecular Mass	The recombinant mouse Ostm1 consists of 265 amino acids and predicts a molecular mass of 29.7 kDa.
Endotoxin	< 1.0 EU per µg protein as determined by the LAL method.
Purity	> 95% as determined by SDS-PAGE.
Storage	Samples are stable for up to twelve months from date of receipt at -70 centigrade. Store it under sterile conditions at -20 centigrade to -80 centigrade. It is recommended that the protein be aliquoted for optimal storage. Avoid repeated freeze-thaw cycles.
Reconstitution	It is recommended that sterile water be added to the vial to prepare a stock solution of 0.2 ug/ul. Centrifuge the vial at 4°C before opening to recover the entire contents.

GENE INFORMATION

Gene Name	Ostm1 osteopetrosis associated transmembrane protein 1 [Mus musculus]
Official Symbol	Ostm1
Synonyms	OSTM1; osteopetrosis associated transmembrane protein 1; osteopetrosis-associated transmembrane protein 1; grey lethal osteopetrosis; gl; HSPC019; 1200002H13Rik;
Gene ID	14628

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mRNA Refseq	NM_172416
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Protein Refseq	NP_766004
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