

OSMR Protein, Human, Recombinant (His)

General Information

Synonyms:	OSMRB;PLCA1;oncostatin M receptor;IL-31RB
Protein Construction:	A DNA sequence encoding the human OSMR (NP_003990.1) extracellular domain (Met 1-Met 740) was expressed, fused with a polyhistidine tag at the C-terminus. Predicted N terminal: Glu 28
Species:	Human
Expression Host:	HEK293 Cells
Accession:	Q99650-1
Molecular Weight:	82.6 kDa (predicted); 130-140 kDa (reducing condition, due to glycosylation)

QC Testing

Biological Activity:	1. Loaded Anti-Human OSMR antibody, human IgG1 on ProA Biosensor, can bind Recombinant Human OSMR Protein, His Tag with an affinity constant of 0.40 nM as determined in a BLI assay (Routinely tested). 2. Immobilized Anti-OSMR β Antibody at 2 μ g/mL (100 μ L/well) can bind Recombinant Human OSMR / IL31RB Protein (His Tag), the EC50 is 4-12 ng/mL.
Purity:	\geq 96 % as determined by SDS-PAGE. \geq 90 % as determined by SEC-HPLC.
Endotoxin:	< 1.0 EU/ μ g of the protein as determined by the LAL method.
Formulation:	Lyophilized from a solution filtered through a 0.22 μ m filter, containing PBS, pH 7.4. Typically, a mixture containing 5% to 8% trehalose, mannitol, and 0.01% Tween 80 is incorporated as a protective agent before lyophilization.

Preparation and Storage

Reconstitution:
Reconstituted with sterile deionized water to 0.25 mg/mL. Reconstitution conditions may vary depending on the lot.

Stability & Storage:

It is recommended to store recombinant proteins at -20°C to -80°C for future use. Lyophilized powders can be stably stored for over 12 months, while liquid products can be stored for 6-12 months at -80°C. For reconstituted protein solutions, the solution can be stored at -20°C to -80°C for at least 3 months. Please avoid multiple freeze-thaw cycles and store products in aliquots.

Actual storage temperature shall be subject to the COA.

Shipping:

In general, lyophilized powders are shipped with blue ice, while solutions are shipped with dry ice.

Protein Background

Oncostatin-M specific receptor subunit beta also known as the oncostatin M receptor (OSMR) and Interleukin-31 receptor subunit beta (IL-31RB), is one of the receptor proteins for oncostatin M. OSMR is a member of the type I cytokine receptor family. IL-31RB/OSMR heterodimerizes with interleukin 6 signal transducer to form the type II oncostatin M receptor and with interleukin 31 receptor A to form the interleukin 31 receptor, and thus transduces oncostatin M and interleukin 31 induced signaling events. Mutations in IL-31RB/OSMR have been associated with familial primary localized cutaneous amyloidosis. Defects in IL-31RB/OSMR are the cause of amyloidosis primary localized cutaneous type 1 (PLCA1), also known as familial lichen amyloidosis of familial cutaneous lichen amyloidosis. PLCA1 is hereditary primary amyloidosis characterized by localized cutaneous amyloid deposition. This condition usually presents with itching (especially on the lower legs) and visible changes of skin hyperpigmentation and thickening (lichenification) that may be exacerbated by chronic scratching and rubbing. The amyloid deposits probably reflect a combination of degenerate keratin filaments, serum amyloid P component, and deposition of immunoglobulins.

Reference

- Arita K, et al.. (2008) Oncostatin M Receptor- β Mutations Underlie Familial Primary Localized Cutaneous Amyloidosis. *Am J Hum. Genet.* 82 (1): 73-80.
- Malaval L, et al.. (2005) GP130/OSMR is the only LIF/IL-6 family receptor complex to promote osteoblast differentiation of calvaria progenitors. *J Cell Physiol.* 204(2): 585-93.
- Lin MW, et al.. (2010) Novel IL31RA gene mutation and ancestral OSMR mutant allele in familial primary cutaneous amyloidosis. *Eur J Hum Genet.* 18(1): 26-32.

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