

Recombinant Rat OSMR Protein

For Research Use Only

1. Basic Product Information

Catalog No.: REP52522

Size: 10ug, 100ug

Protein Name: Oncostatin-M-specific receptor subunit beta (Interleukin-31 receptor subunit beta) (IL-31 receptor subunit beta) (IL-31R subunit beta) (IL-31R-beta) (IL-31RB) (OSM-specific receptor) (OSM-R)

Synonym: Osmr, Osmrb

UniProt ID: Q65Z14

UniProt Link: www.uniprot.org/uniprotkb/Q65Z14/entry

Species Source: Rat

Expression System: HEK293T eukaryotic cell expression system Sequence

Length: 962 AA

Molecular Weight: 109 KD

Protein Tag: C-terminal His6

2. Amino Acid Sequence

MAFSVVLHQVTFLAVLSLRTSQSKVLGEPLQLTPEIHTVSLQSALQEANLEWTVPTFSHQELNIVFQI
EISRMRTSNTIWWGNYSTTVKHEETVHWKWTSDIPLECATHFIRIRAMVDDAQYPPQSSWSNWSSW
KEVNAQVSVPPDTLLIFPEDRLLEEGSNVTICLMIGQNLVNSCKLQEEPIRGEQLDSHLSLIKLNNAV
FLNNAAGTNINCKAMNGTKNTFGTVLFVSKVLEPKNFSCETRDFTLNCLWEPGIDTTLSWHKQRSQ
HYTLYESFSGRREVSNHRNSHTWQITEDSQETYNTFTLTAENNLKRVSISFNLTHRVHPKAPHDVT
LKTVGATKAHMTWKVPSRGDYTLQCVELQCEGEVIHEHNVSVHTSANYLFSLEPDTEYKACVRC
ASANHFWKWSDWMQKKFRTPEAAPSEALDVWRDVRTENGRHVTLFWKPLLKSQANGKIISYNIVV
ENEANPTESEQYSVRAPALGTNLSLDLHPYKIHISANNSAGASPELVVLSSHSGHEEVHEKTIKGIK
NGFNISWEPVSGDAIGYVVDWCAHSQTQRCDLQWKNVGNITSTIITSDAFEPGVRYNFRIFERSVE
ENVRLVEKQRGYTQELAPSVNPGVTIHNLTPNSFSLKWQDYASDFQSGFIKGYLVYLKSKELQCNP
WERTVLSDKSVLCKYDVDDPETKLTVENLRPESLYEFLVTPYTSAGQGPNETYTKVTTTPDVRSHML
LQIILPMTLGVFLSIIVCYWKSQWVKEKCYPDIPNPYKSSILSLIKSKKNPHLIMNVKDCIPDVLEVINKA
EGSKTQCVGSGKLHTEDVPTKPLVPTEKDSSGPMFVFLNFYDQSAFDSGSHGFIPGPKNT
HQLGLLAPPNKLQNVLENDYMKSLVESPTTEETSLIYVSQLASPICGDKDSLVTNPPMPVHGSEYKKQ
MALPGSLTSASLKNNLTS

3. Buffer Composition

Liquid format: PBS-based buffer containing 50% glycerol. Glycerol concentration can be customized upon customer request; please state special requirements when placing your order.

Lyophilized format: Buffer before lyophilization is PBS supplemented with 6% trehalose.

4. Storage Conditions

Upon receipt, store the product at -20 °C or -80 °C. Aliquot the product for on-demand use to preserve protein activity and prevent denaturation and inactivation caused by repeated freeze-thaw cycles.

5. Product Description

This product is recombinant Oncostatin-M-specific receptor subunit beta (Interleukin-31 receptor subunit beta) (IL-31 receptor subunit beta) (IL-31R subunit beta) (IL-31R-beta) (IL-31RB) (OSM-specific receptor) (OSM-R) produced using the HEK293T eukaryotic cell expression system. It is suitable for in-vitro functional assays, protein-protein interaction studies, antibody preparation and other biomedical research applications.

Protein Function: Functions as a shared membrane-bound signal-transducing subunit in two distinct receptor complexes, the type II OSM receptor (heterodimer composed of OSMR and IL6ST) and the IL31 receptor complex (heterodimer composed of OSMR and IL31RA) which respectively bind OSM and IL31 (By similarity). Functionally, OSM signaling via OSMR/IL6ST regulates many processes including cell proliferation, cell differentiation, cytokine production, whereas the IL31 signaling via OSMR/IL31RA is particularly important in skin immunity (PubMed:15743783). Mechanistically, in both the OSM-IL6ST/gp130-OSMR and IL31-IL31RA-OSMR complexes, receptor dimerization activates JAK1 and JAK2 (and to a lesser extent TYK2) associated with the intracellular domains of IL6ST/gp130 and OSMR (or IL31RA and OSMR) (By similarity). These kinases phosphorylate tyrosine residues on IL6ST/gp130 and OSMR (or IL31RA and OSMR), creating docking sites for STAT1, STAT3, and STAT5B, which are then phosphorylated and activated (By similarity). In addition, the IL31 receptor complex activates the MAPK pathway (MAPK3/ERK1-MAPK1/ERK2) via recruitment of the adapter protein SHC1 (By similarity).

Subcellular Localization: Membrane ; Single-pass type I membrane protein .

6. Notes

- Avoid repeated freeze-thaw cycles to maintain protein stability and biological activity.
- Please specify special buffer-composition requirements at the time of order placement.
- For research use only. Not intended for clinical diagnosis, therapeutic use or commercial manufacturing.