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Recombinant Rat IL6RB Protein

For Research Use Only

1. Basic Product Information

Catalog No.: REP52353

Size: 10ug, 100ug

Protein Name: Interleukin-6 receptor subunit beta (IL-6 receptor subunit beta) (IL-6R subunit beta) (IL-6R-beta) (IL-6RB) (Interleukin-6 signal transducer) (Membrane glycoprotein 130) (gp130) (Oncostatin-M receptor subunit alpha) (CD antigen CD130)

Synonym: Il6st

UniProt ID: P40190

UniProt Link: www.uniprot.org/uniprotkb/P40190/entry

Species Source: Rat

Expression System: HEK293T eukaryotic cell expression system Sequence

Length: 918 AA

Molecular Weight: 102 KD

Protein Tag: C-terminal His6

2. Amino Acid Sequence

MSALRIWLMQALLIFLTTESIGQLVEPCGYIYPEFPVVQRGSNFTATCVLKEKCLQVYSVNATYIVWKT
NHVAVPKEQVTVINRTASSVTFTDVVFQNVQLTCNILSFGQIEQNVYGITILSGYPPDIPTNLSCIVNEG
KNMLCQLDPGRETYLETNYTLKSEWATEKFPDCRTKHGTSSCMMGYTPIYFVNIEVWVEAENALGN
VSSEPINFDPVDKVKPSPPHNLSVTNSEELSSILKLAWVNSGLDSILRLKSDIQYRTKDASTWIQVPLE
DTVSPRTSFTVQDLKPFTEYVFRIRSIKENGKGYWSDWSEEASGTTYEDRPSKAPSFWYKVNANHP
QEYRSARLIWKTLPLSEANGKILDYEVVLTQSKSVSQTYTVNGTELIVNLTNNRYVASLAARNVVGKS
PATVLTIPGSHFKASHPVVDLKAFPKDNLLWVEWTPPSKPVNKYILEWCVLSENSPCIPDWQQEDGT
VNRTHLRGSLLESKCYLITVTPVFPGGPGSPESMKAYLKQAAPSKGPTVRTKKVGKNEAVLEWDHL
PVDVQNGFIRNYSISYRTSVGKEMVVRVDSSHTEYTLSSLSSDTLYMVHMAAYTEEGGKDGPEFTFT
TLKFAQGEIEAIVVPVCLAFLLTTLLGVLFCFNKRDLIKKHIWPNVPDPSKSHIAQWSPHTPPRHNFNS
KDQMYSDANFTDVSVVEIEANNKKPCPDDLKSLDLFKKEKISTEGHSSGIGGSSCMSSSRPSISSSE
ENESAQSTASTVQYSTVVHSGYRHQVPSVQVFSRSESTQPLLDSEERPEDLQLVDSVDSGDEILPR
QQYFKQSCSQPGASPDVSHFGRSSQVPSGSEEDFVRLKQQQVSDHISEPYGSEQRRLFQEGSVAD
ALGTGTDGQIERFESVGMETAMDEDISKSYLPQTVRQGGYMPQ

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 ℃ or -80 ℃. 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 Interleukin-6 receptor subunit beta (IL-6 receptor subunit beta) (IL-6R subunit beta) (IL-6R-beta) (IL-6RB) (Interleukin-6 signal transducer) (Membrane glycoprotein 130) (gp130) (Oncostatin-M receptor subunit alpha) (CD antigen CD130) 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 signal-transducing subunit not only for IL6 but also for other cytokine receptor complexes, including IL6, LIF, OSM, CNTF, IL11, CTF1, BSF3, MT-RNR2/humanin, CLCF1 and the heterodimeric complex CRLF1-CLCF1. Engages site 2 of CNTF, CLCF1, LIF, and IL-6, and site 3 of IL27 and IL6. Initiates signal transmission through three mechanisms. Binding of cytokines, such as IL6 or IL11 to the alpha-chains of their specific cell surface receptor triggers homodimerization of IL6ST/gp130. In contrast, binding of other IL-6 family cytokines can result in the formation of a IL6ST/gp130 heterodimer with another signal-transducing receptor, such as LIFR or OSMR. Moreover, binding of CNTF, CLCF1 or the heterodimeric complex CRLF1-CLCF1 to the non-signaling receptor CNTFR induces heterodimerization of the IL6ST/gp130 with LIFR or IL27RA/WSX1 (in the case of MT-RNR2/humanin). Homodimerization or heterodimerization of IL6ST/gp130 activate JAK tyrosine kinases bound to their intracellular domains. These kinases subsequently phosphorylate the homodimer or heterodimer form of IL6ST/gp130. The tyrosine phosphorylated signaling receptors serve in turn as docking sites for recruitment and activation of signal transducer and activators of transcription (By similarity). The IL6 signaling pathway induces, in parallel, the expression of two cytokine receptor signaling inhibitors, SOCS1 and SOCS3, which inhibit JAK and terminate the activity of the IL6 signaling pathway as a negative feedback loop (By similarity). Also activates the yes-associated protein 1 (YAP) and NOTCH pathways to control inflammation-induced epithelial regeneration, independently of STAT3 (By similarity). Mediates signals which regulate immune response, hematopoiesis, pain control and bone metabolism (By similarity). Has a role in embryonic development (By similarity). Essential for survival of motor and sensory neurons and for differentiation of astrocytes (By similarity). Required for expression of TRPA1 in nociceptive neurons (By similarity). Required for the maintenance of PTH1R expression in the osteoblast lineage and for the stimulation of PTH-induced osteoblast differentiation (By similarity). Required for normal trabecular bone mass and cortical bone composition (By similarity).

Subcellular Localization: Cell 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.