

Recombinant Mouse IL6RA Protein

For Research Use Only

1. Basic Product Information

Catalog No.: REP51320

Size: 10ug, 100ug

Protein Name: Interleukin-6 receptor subunit alpha (IL-6 receptor subunit alpha) (IL-6R subunit alpha) (IL-6R-alpha) (IL-6RA) (IL-6R 1) (CD antigen CD126) [Cleaved into: Soluble interleukin-6 receptor subunit alpha (sIL6R)]

Synonym: Il6ra, Il6r

UniProt ID: P22272

UniProt Link: www.uniprot.org/uniprotkb/P22272/entry

Species Source: Mouse

Expression System: HEK293T eukaryotic cell expression system Sequence

Length: 460 AA

Molecular Weight: 50 KD

Protein Tag: C-terminal His6

2. Amino Acid Sequence

MLTVGCTLLVALLAAPAVALLVGLSCRALEVANGTVTSLPGATVTLICPGKEAAGNVTIHWVYSGSQN
REWTTTGTNTLVLRDVQLSDTGDYLCSLNDHLVGTVPPLLVDVPPEEPKLSCFRKNPLVNAICEWRPSS
TPSPTTKAVLFAKKINTTNGKSDFQVPCQYSQQLKSFSCQVEILEGDKVYHIVSLCVANSVGSKSSHN
EAFHSLKMQPDPPANLVVSAIPGRPRWLKVSQHPETWDPSYLLQFQLRYRPVWSKEFTVLLLP
VAQYQCVIHDALRGVKHVVQVRGKEELDLGQWSEWSPEVTGTPWIAEPRTTPAGILWNPTQVSVE
DSANHEDQYESSTEATSVLAPVQESSMSLPTFLVAGGSLAFGLLLCVFIILRLKQKWKSEAEKESKT
TSPPPPPYSLGPLKPTFLLVPLLTPHSSGSDNTVNHSCLGVRDAQSPYDNSNRDYLFP

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 Interleukin-6 receptor subunit alpha (IL-6 receptor subunit alpha) (IL-6R subunit alpha) (IL-6R-alpha) (IL-6RA) (IL-6R 1) (CD antigen CD126) [Cleaved into: Soluble interleukin-6 receptor subunit alpha (sIL6R)] 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: Part of the receptor for interleukin 6. Binds to IL6 with low affinity, but does not transduce a signal. Signal activation necessitate an association with IL6ST. Activation leads to the regulation of the immune response, acute-phase reactions and hematopoiesis. The interaction with membrane-bound IL6R and IL6ST stimulates 'classic signaling', the restricted expression of the IL6R limits classic IL6 signaling to only a few tissues such as the liver and some cells of the immune system. Whereas the binding of IL6 and soluble IL6R to IL6ST stimulates 'trans-signaling'. Alternatively, 'cluster signaling' occurs when membrane-bound IL6:IL6R complexes on transmitter cells activate IL6ST receptors on neighboring receiver cells.; [Interleukin-6 receptor subunit alpha]: Signaling via the membrane-bound IL6R is mostly regenerative and anti-inflammatory (Probable). Drives naive CD4(+) T cells to the Th17 lineage, through 'cluster signaling' by dendritic cells (PubMed:27893700).; [Soluble interleukin-6 receptor subunit alpha]: Soluble form of IL6 receptor (sIL6R) that acts as an agonist of IL6 activity (PubMed:11113088). The IL6:sIL6R complex (hyper-IL6) binds to IL6ST/gp130 on cell surfaces and induces signaling also on cells that do not express membrane-bound IL6R in a process called IL6 'trans-signaling'. sIL6R is causative for the pro-inflammatory properties of IL6 and an important player in the development of chronic inflammatory diseases (By similarity). In complex with IL6, is required for induction of VEGF production (By similarity). Plays a protective role during liver injury, being required for maintenance of tissue regeneration (PubMed:11113088). 'Trans-signaling' in central nervous system regulates energy and glucose homeostasis (PubMed:28402851).

Subcellular Localization: [Interleukin-6 receptor subunit alpha]: Cell membrane ; Single-pass type I membrane protein .; [Soluble interleukin-6 receptor subunit alpha]: Secreted .

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.