

Recombinant Rat IL6RA Protein

For Research Use Only

1. Basic Product Information

Catalog No.: REP52310

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: Il6r, Il6ra

UniProt ID: P22273

UniProt Link: www.uniprot.org/uniprotkb/P22273/entry

Species Source: Rat

Expression System: HEK293T eukaryotic cell expression system Sequence

Length: 462 AA

Molecular Weight: 50 KD

Protein Tag: C-terminal His6

2. Amino Acid Sequence

MLAVGCTLLVALLAAPAVALVLGSCRALEVANGTVTSLPGATVTLICPGKEAAGNATIHVVYSGSQS
REWTTTGTNTLVLRVQVNDTGHYLCFLDDHLVGTVPPLLVDVPPEEPKLSCFRKNPLVNAFCEWHPS
STPSPTTKAVMFAKKINTTNGKSDFQVPCQYSQQLKSFSCVEILEGDKVYHIVSLCVANSVGSRSS
HNVVFQSLKMQPDPPANLVVSAIPGXPRWLKVSQWQDPESWDPSYYLLQFELRYRPVWSKXFTVW
PLQVAQHQCVIHDALRGVKHVQVRGKEEFDIGQWSKWSPEVTGTPWLAEPRTTPAGIPGNPTQV
SVEDYDNHEDQYGSSTEATSVLAPVQGSSPIPLPTFLVAGGSLAFGLLLCVFIILRLKKKWKWSQAEKE
SKTTSPPPYPLGPLKPTFLLVPLLTPSGSHNSSGTDNTGSHSCLGVRDPQCPNDNSNRDYLFP

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. Drives naive CD4(+) T cells to the Th17 lineage, through 'cluster signaling' by dendritic cells.; [Soluble interleukin-6 receptor subunit alpha]: Soluble form of IL6 receptor (sIL6R) that acts as an agonist of IL6 activity (By similarity). 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. 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. 'Trans-signaling' in central nervous system regulates energy and glucose homeostasis (By similarity).

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.