

Recombinant Rat IL1B Protein

For Research Use Only

1. Basic Product Information

Catalog No.: REP52496

Size: 10ug, 100ug

Protein Name: Interleukin-1 beta (IL-1 beta)

Synonym: Il1b

UniProt ID: Q63264

UniProt Link: www.uniprot.org/uniprotkb/Q63264/entry

Species Source: Rat

Expression System: HEK293T eukaryotic cell expression system Sequence

Length: 268 AA

Molecular Weight: 31 KD

Protein Tag: C-terminal His6

2. Amino Acid Sequence

MATVPELNCEIAAFDSEENDLFFEADRPQKIKDCFQALDLGCPDESIQLQISQQHLDKSFRKAVSLIVA
VEKLWQLPMSCPWSFQDEDPSTFFSFIFEEEPVLCDSWDDDDLLVCDVPIRQLHCRLRDEQQKCLV
LSDPCELKALHLNGQNISQQVVFMSFVQGETSNDKIPVALGLKGLNLYLSCVMKDGTPTLQLESVD
PKQYPKKKMEKRFVFNKIEVKTKVEFESAQFPNWIYSTSQAHRPVFLGNSNGRDIVDFTMEPVSS

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-1 beta (IL-1 beta) 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: Potent pro-inflammatory cytokine. Initially discovered as the major endogenous pyrogen, induces prostaglandin synthesis, neutrophil influx and activation, T-cell activation and cytokine production, B-cell activation and antibody production, and fibroblast proliferation and collagen production. Promotes Th17 differentiation of T-cells. Synergizes with IL12/interleukin-12 to induce IFNG synthesis from T-helper 1 (Th1) cells. Plays a role in angiogenesis by inducing VEGF production synergistically with TNF and IL6. Involved in transduction of inflammation downstream of pyroptosis: its mature form is specifically released in the extracellular milieu by passing through the gasdermin-D (GSDMD) pore.

Subcellular Localization: Cytoplasm, cytosol . Secreted . Lysosome . Secreted, extracellular exosome . Note=The precursor is cytosolic. In response to inflammasome-activating signals, such as ATP for NLRP3 inflammasome or bacterial flagellin for NLRC4 inflammasome, cleaved and secreted. Mature form is secreted and released in the extracellular milieu by passing through the gasdermin-D (GSDMD) pore. In contrast, the precursor form is not released, due to the presence of an acidic region that is proteolytically removed by CASP1 during maturation. The secretion is dependent on protein unfolding and facilitated by the cargo receptor TMED10.

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.