

Recombinant Human CRLF1 Protein

For Research Use Only

1. Basic Product Information

Catalog No.: REP50215

Size: 10ug, 100ug

Protein Name: Cytokine receptor-like factor 1 (Cytokine-like factor 1) (CLF-1) (ZcytoR5)

Synonym: CRLF1, UNQ288/PRO327

UniProt ID: O75462

UniProt Link: www.uniprot.org/uniprotkb/O75462/entry

Species Source: Human

Expression System: HEK293T eukaryotic cell expression system Sequence

Length: 422 AA

Molecular Weight: 46 KD

Protein Tag: C-terminal His6

2. Amino Acid Sequence

MPAGRRGPAAQSARRPPPLLPLLLLLCVLGAPRAGSGAHTAVISPDPTLLIGSSLLATCSVHGDPP
GATAEGLYWTLNGRRLPPELSRVLNASTLALALANLNGSRQRSGDNLVCHARDGSILAGSCLYVGL
PPEKPVNISCWSKNMKDLTCRWTPGAHGETFLHTNYSKYKLRWYGQDNTCEEYHTVGPHSCHIP
KDLALFTPYEIWVEATNRLGSARSDVLTLDILDVTTDPPPDVHVS RVGGLEDQLSVRWVSPALKD
FLFQAKYQIRYRVEDSDWKVVDDVSNQTSCLAGLKPGTVYFVQVRCNPFGIYGSKKAGIWSEWS
HPTAASTPRSERPGPGGGACEPRGGEPSSGPVRRELKQFLGWLKKHAYCSNLSFRLYDQWRAWM
QKSHKTRNQDEGILPSGRRGTARGPAR

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 Cytokine receptor-like factor 1 (Cytokine-like factor 1) (CLF-1) (ZcytoR5) 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 secretory protein carrier chaperone that promotes cellular release (PubMed:10966616). Also functions as a cytokine subunit within the CRLF1-CLCF1 heterodimer, which engages the CNTF receptor complex (CNTFR, IL6ST/gp130, LIFR) (PubMed:10966616). As part of the CRLF-CLCF1 complex, binds to CNTFR, induces dimerization of the IL6ST/gp130 and LIFR, which activates JAK tyrosine kinases (JAK1 or JAK2 and to lesser extent TYK2) bound to their intracellular domains (PubMed:11294841). These kinases subsequently phosphorylate IL6ST/gp130 and LIFR (PubMed:11294841). The tyrosine phosphorylated signaling receptors serve in turn as docking sites for recruitment and activation of signal transducer and activators of transcription (STAT3 and to lesser extent STAT1) (PubMed:10966616, PubMed:11294841). Moreover, CLCF1/CLF heterodimer induces tyrosine phosphorylation of PTPN11, that associates with IL6ST/gp130-LIFR, which in turn recruits PIK3 protein kinase followed by AKT protein phosphorylation (PubMed:11294841). Participates in the survival of embryonic motor neurons (PubMed:10966616). May also play a regulatory role in the immune system (PubMed:9686600).

Subcellular Localization: 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.