

Recombinant Rat IL17F Protein

For Research Use Only

1. Basic Product Information

Catalog No.: REP52468

Size: 10ug, 100ug

Protein Name: Interleukin-17F (IL-17F)

Synonym: Il17f

UniProt ID: Q5BJ95

UniProt Link: www.uniprot.org/uniprotkb/Q5BJ95/entry

Species Source: Rat

Expression System: HEK293T eukaryotic cell expression system Sequence

Length: 161 AA

Molecular Weight: 18 KD

Protein Tag: C-terminal His6

2. Amino Acid Sequence

MKGSCETTMVKSLLLLMLGFAISSGAARRNPKVGLSALQKAGNCPPLEDNSVRVDIRIFNQNGISV
PRDFQNRSSSPWDYNITRDPDRFPSEIAEAQCRHSGCINAQQGEDGSMNSVPIQQEILVLRREPQG
CSNSFRLEKMLIKVGCTCVTPIVHAA

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-17F (IL-17F) 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: Effector cytokine of innate and adaptive immune system involved in antimicrobial host defense and maintenance of tissue integrity. IL17A-IL17F signals via IL17RA-IL17RC heterodimeric receptor complex, triggering homotypic interaction of IL17RA and IL17RC chains with TRAF3IP2 adapter through SEFIR domains. This leads to downstream TRAF6-mediated activation of NF-kappa-B and MAPkinase pathways ultimately resulting in transcriptional activation of cytokines, chemokines, antimicrobial peptides and matrix metalloproteinases, with potential strong immune inflammation. IL17A-IL17F is primarily involved in host defense against extracellular bacteria and fungi by inducing neutrophilic inflammation. As signature effector cytokine of T-helper 17 cells (Th17), primarily induces neutrophil activation and recruitment at infection and inflammatory sites. Stimulates the production of antimicrobial beta-defensins DEFB1, DEFB103A, and DEFB104A by mucosal epithelial cells, limiting the entry of microbes through the epithelial barriers. IL17F homodimer can signal via IL17RC homodimeric receptor complex, triggering downstream activation of TRAF6 and NF-kappa-B signaling pathway. Via IL17RC induces transcriptional activation of IL33, a potent cytokine that stimulates group 2 innate lymphoid cells and adaptive T-helper 2 cells involved in pulmonary allergic response to fungi. Likely via IL17RC, promotes sympathetic innervation of peripheral organs by coordinating the communication between gamma-delta T cells and parenchymal cells. Stimulates sympathetic innervation of thermogenic adipose tissue by driving TGFB1 expression. Regulates the composition of intestinal microbiota and immune tolerance by inducing antimicrobial proteins that specifically control the growth of commensal Firmicutes and Bacteroidetes.

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.