

Recombinant Human IL33 Protein

For Research Use Only

1. Basic Product Information

Catalog No.: REP50527

Size: 10ug, 100ug

Protein Name: Interleukin-33 (IL-33) (Interleukin-1 family member 11) (IL-1F11) (Nuclear factor from high endothelial venules) (NF-HEV) [Cleaved into: Interleukin-33 (95-270); Interleukin-33 (99-270); Interleukin-33 (109-270)]

Synonym: IL33, C9orf26, IL1F11, NFHEV

UniProt ID: O95760

UniProt Link: www.uniprot.org/uniprotkb/O95760/entry

Species Source: Human

Expression System: HEK293T eukaryotic cell expression system Sequence

Length: 270 AA

Molecular Weight: 31 KD

Protein Tag: C-terminal His6

2. Amino Acid Sequence

MKPKMKYSTNKISTAKWKNTASKALCFKLGKSQQKAKEVCPMYFMKLRSGLMIKKEACYFRRETTK
RPSLKTGRKHKRHLVLAACQQQSTVECFAGISGVQKYTRALHDSSITGISPITEYLASLSTYNDQSIT
FALEDESYEIYVEDLKKDEKKDKVLLSYYESQHPSNESGDGVDGKMLMVTLSPTKDFWLHANNKEH
SVELHKCEKPLPDQAFFVLHNMHSNCVSFECKTDPGVFIGVKDNHLALIKVDSSENLCTENILFKLSE
T

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-33 (IL-33) (Interleukin-1 family member 11) (IL-1F11) (Nuclear factor from high endothelial venules) (NF-HEV) [Cleaved into: Interleukin-33 (95-270); Interleukin-33 (99-270); Interleukin-33 (109-270)] 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: Cytokine that binds to and signals through the IL1RL1/ST2 receptor which in turn activates NF-kappa-B and MAPK signaling pathways in target cells (PubMed:16286016, PubMed:19841166). Involved in the maturation of Th2 cells inducing the secretion of T-helper type 2-associated cytokines (PubMed:17853410, PubMed:18836528). Also involved in activation of mast cells, basophils, eosinophils and natural killer cells (PubMed:17853410, PubMed:18836528). Acts as an enhancer of polarization of alternatively activated macrophages (PubMed:19841166). Acts as a chemoattractant for Th2 cells, and may function as an 'alarmin', that amplifies immune responses during tissue injury (PubMed:17853410, PubMed:18836528). Induces rapid UCP2-dependent mitochondrial rewiring that attenuates the generation of reactive oxygen species and preserves the integrity of Krebs cycle required for persistent production of itaconate and subsequent GATA3-dependent differentiation of inflammation-resolving alternatively activated macrophages (By similarity).; In quiescent endothelia the uncleaved form is constitutively and abundantly expressed, and acts as a chromatin-associated nuclear factor with transcriptional repressor properties, it may sequester nuclear NF-kappaB/RELA, lowering expression of its targets (PubMed:21734074). This form is rapidly lost upon angiogenic or pro-inflammatory activation (PubMed:18787100).

Subcellular Localization: Nucleus . Chromosome . Cytoplasm . Cytoplasmic vesicle, secretory vesicle . Secreted . Note=Secreted and released in the extracellular milieu by passing through the gasdermin-D (GSDMD) pore following cleavage by CELA1 (PubMed:35794369). Associates with heterochromatin and mitotic chromosomes (PubMed:17185418). The secretion is dependent on protein unfolding and facilitated by the cargo receptor TMED10; it results in protein translocation from the cytoplasm into the ERGIC (endoplasmic reticulum-Golgi intermediate compartment) followed by vesicle entry and secretion (PubMed:32272059).

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.