

Recombinant Rat IL33 Protein

For Research Use Only

1. Basic Product Information

Catalog No.: REP52524

Size: 10ug, 100ug

Protein Name: Interleukin-33 (IL-33)

Synonym: IL33

UniProt ID: Q66H70

UniProt Link: www.uniprot.org/uniprotkb/Q66H70/entry

Species Source: Rat

Expression System: HEK293T eukaryotic cell expression system Sequence

Length: 264 AA

Molecular Weight: 29 KD

Protein Tag: C-terminal His6

2. Amino Acid Sequence

MRPRMKYSNSKISPAKCDSTSGRALVPPCKITRSQQKTKDICHVYCMRLRSGLTIRKETCYFGKEPA
KRYSLKSGSKHEGRLSTCLPDSRKRSLLGSIQAFASVDTLSIQGTSLLTESCALSTYNDQSVSFVLE
NGCYVINVEDCGKNQEKDKVLLRYYESSFPAQSGDGVGKKLMVNMSPIKDIDIWLNANDKDYSVE
LQKGDVSPPDQAFFVLHKKSSDFVSFECKNLPGTYIGVKDNQLALVEENDESCNNIMFKLSKM

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) 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. Involved in the maturation of Th2 cells inducing the secretion of T-helper type 2-associated cytokines. Also involved in activation of mast cells, basophils, eosinophils and natural killer cells. Acts as a chemoattractant for Th2 cells, and may function as an 'alarmin', that amplifies immune responses during tissue injury (By similarity). 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. This form is rapidly lost upon angiogenic or pro-inflammatory activation (By similarity).

Subcellular Localization: Nucleus . Chromosome . Cytoplasm . Cytoplasmic vesicle, secretory vesicle . Secreted . Note=Associates with heterochromatin and mitotic chromosomes. 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.

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.