

Recombinant Mouse IL33 Protein

For Research Use Only

1. Basic Product Information

Catalog No.: REP51738

Size: 10ug, 100ug

Protein Name: Interleukin-33 (IL-33) [Cleaved into: Interleukin-33(102-266); Interleukin-33(109-266)]

Synonym: Il33

UniProt ID: Q8BVZ5

UniProt Link: www.uniprot.org/uniprotkb/Q8BVZ5/entry

Species Source: Mouse

Expression System: HEK293T eukaryotic cell expression system Sequence

Length: 266 AA

Molecular Weight: 30 KD

Protein Tag: C-terminal His6

2. Amino Acid Sequence

MRPRMKYSNSKISPAKFSSTAGEALVPPCKIRRSQQKTKEFCHVYCMRLRSGLTIRKETSIFRKEPT
KRYSLKSGTKHEENFSAYPRDSRKRSLLGSIQAFASVDTLSIQGTSLLTQSPASLSTYNDQSVSFV
ENGCVINVDSDSGKDQEQDQVLLRYYESPCPASQSGDGVGKKLMVNMSPIKDTDIWLHANDKDY
SVELQRGDVSPPEQAFFVLHKKSSDFVSFECKNLPGTYIGVKDNQLALVEEKDESCNNIMFKLSKI

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) [Cleaved into: Interleukin-33(102-266); Interleukin-33(109-266)] 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:29045903). Involved in the maturation of Th2 cells inducing the secretion of T-helper type 2-associated cytokines (By similarity). Also involved in activation of mast cells, basophils, eosinophils and natural killer cells (By similarity). Acts as an enhancer of polarization of alternatively activated macrophages (By similarity). 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 (PubMed:34644537).; 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 (By similarity). This form is rapidly lost upon angiogenic or pro-inflammatory activation (By similarity).

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:35749514, PubMed:35794369). Associates with heterochromatin and mitotic chromosomes (By similarity). 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 (By similarity).; Nucleus . Note=(Microbial infection) Upon infection with H.polygyrus, tethered to the nucleus by the H.polygyrus parasitic protein ARI.

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.