

Cytokines

Mouse Recombinant IL-33



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Catalog # 78044
78044.1

Interleukin 33

10 µg
1000 µg

Product Description

Interleukin 33 (IL-33) is a pro-inflammatory cytokine from the IL-1 family. It binds to the ST2 receptor and activates NF-κB and MAPK pathways. IL-33 is expressed by epithelial cells, smooth muscle cells, and fibroblasts in various tissues and organs, as well as resting basophils, mast cells, eosinophils, natural helper cells, group 2 innate lymphoid cells, dendritic cells, and activated macrophages (Schmitz et al.; Yasuda et al.). It contributes to allergic inflammation by stimulating production of the cytokines IL-4, IL-5, and IL-13 in Th2 cells, and stimulates host defense against microbial and viral infections (Liew; Yasuda et al.). In the central nervous system, IL-33 is produced by endothelial cells and astrocytes. It induces proliferation of microglia and mediates production of pro-inflammatory cytokines (Yasuoka et al.).

Product Information

Alternative Names: IL-1F11, Interleukin-33
Accession Number: Q8BVZ5
Amino Acid Sequence: SIQGTSLLTQ SPASLSTYND QSVSFVLENG CYVINVDDSG KDQEQQVLL RYYESPCPAS QSGDGVGKK LMVNMSPIKD TDIWLHANDK DYSVELQRGD VSPPEQAFFV LHKKSSDFVS FECKNLPPTY IGVKDNQLAL VEEKDESCNN IMFKLSKI
Predicted Molecular Mass: 17.5 kDa
Species: Mouse
Cross Reactivity: Human
Formulation: Lyophilized from sterile-filtered phosphate-buffered saline containing EDTA.
Source: E. coli

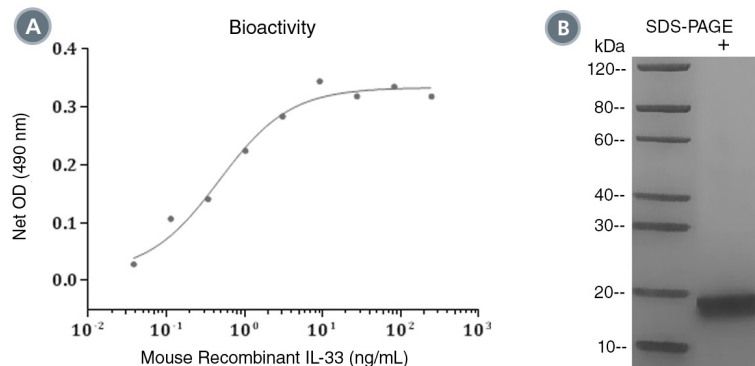
Specifications

Activity: The specific activity is $\geq 2 \times 10^6$ units/mg ($EC_{50} \leq 0.5$ ng/mL) as determined by a cell proliferation assay using D10S cells.
Purity: $\geq 95\%$
Endotoxin Level: Measured by kinetic Limulus amoebocyte lysate (LAL) analysis and is ≤ 0.2 EU/µg protein.

Preparation and Storage

Storage: Store at -20°C to -80°C.
Stability: Stable as supplied for 12 months from date of receipt.
Preparation: Centrifuge vial before opening. Reconstitute the product in sterile water or aqueous buffer containing 0.1% bovine serum albumin (BSA) to at least 0.1 mg/mL by pipetting sterile solution down the sides of the vial. Do not vortex. Store at 2 - 8°C or -20 to -80°C for up to 1 week. Avoid repeated freeze-thaw cycles.

Data



(A) The biological activity of Mouse Recombinant IL-33 was tested by its ability to promote the proliferation of D10S cells. Cell proliferation was measured using a fluorometric assay method. The EC₅₀ is defined as the effective concentration of the growth factor at which cell proliferation is at 50% of maximum. The EC₅₀ in the above example is 0.47 ng/mL.

(B) 5 µg of Mouse Recombinant IL-33 was resolved with SDS-PAGE under reducing (+) conditions and visualized by Coomassie Blue staining. Mouse Recombinant IL-33 has a predicted molecular mass of 17.5 kDa.

Related Products

For a complete list of cytokines, as well as related products available from STEMCELL Technologies, visit www.stemcell.com/cytokines or contact us at techsupport@stemcell.com.

References

- Liew FY. (2012) IL-33: a Janus cytokine. *Ann Rheum Dis* 71 Suppl 2(Suppl_2): i101–4.
- Schmitz J et al. (2005) IL-33, an interleukin-1-like cytokine that signals via the IL-1 receptor-related protein ST2 and induces T helper type 2-associated cytokines. *Immunity* 23(5): 479–90.
- Yasuda K et al. (2012) Contribution of IL-33-activated type II innate lymphoid cells to pulmonary eosinophilia in intestinal nematode-infected mice. *Proc Natl Acad Sci USA* 109(9): 3451–6.
- Yasuoka S et al. (2011) Production and functions of IL-33 in the central nervous system. *Brain Res* 1385: 8–17.

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