

Mouse Recombinant IL-33

Interleukin 33

Catalog #78044	10 µg
Catalog #78044.1	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 LMVNMSPKID TDIWLHANDK DYSVELQRGD VSPPEQAFFV LHKKSSDFVS FECKNLPGTY IGVKDNQLAL VEEKDESCNN IMFKLSKI
Predicted Molecular Mass:	17.5 kDa
Species:	Mouse
Product 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

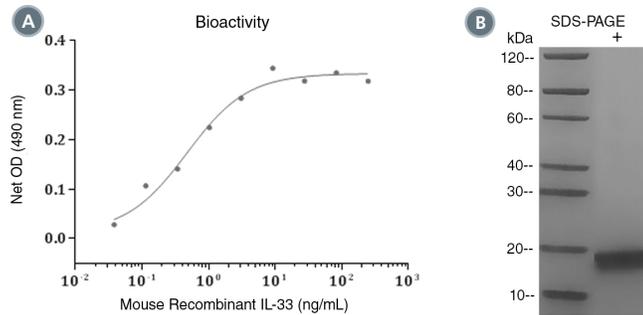
Stability and Storage:

Store at -20°C to -80°C. 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. As a general guide, do not store at 2 - 8°C for more than 1 week or at -20°C for more than 3 months. 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. 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 or peptide pools, 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 nematodeinfected 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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