Datasheet

Cat. No. P1134

Recombinant Human IL-33

Information

Gene ID	90865
Accession #	O95760
Alternate Names	Interleukin-33, IL-1F11, NF-HEV, DVS 27
Source	*Escherichia coli.*
M.Wt	Approximately 17.9 kDa, a single non-glycosylated polypeptide chain containing 159 amino acids.
AA Sequence	SITGISPITE YLASLSTYND QSITFALEDE SYEIYVEDLK KDEKKDKVLL SYYESQHPSN ESGDGVDGKM LMVTLSPTKD FWLHANNKEH SVELHKCEKP LPDQAFFVLH NMHSNCVSFE CKTDPGVFIG VKDNHLALIK VDSSENLCTE NILFKLSET
Appearance	Sterile Filtered White lyophilized (freeze-dried) powder.
Stability & Storage	Use a manual defrost freezer and avoid repeated freeze-thaw cycles. - 12 months from date of receipt, -20 to -70°C as supplied. - 1 month, 2 to 8°C under sterile conditions after reconstitution. - 3 months, -20 to -70°C under sterile conditions after reconstitution.
Formulation	Lyophilized from a 0.2μm filtered concentrated solution in 20 mM PB, 150 mM NaCl, 1mM EDTA, pH7.4.
Reconstitution	We recommend that this vial be briefly centrifuged prior to opening to bring the contents to the bottom. Reconstitute in sterile distilled water or aqueous buffer containing 0.1% BSA to a concentration of 0.1-1.0 mg/mL. Stock solutions should be apportioned into working aliquots and stored at ≤ -20°C. Further dilutions should be made in appropriate buffered solutions.
Biological Activity	Fully biologically active when compared to standard. The ED_{50} as determined by a cell proliferation assay using murine D10S cells is less than 0.05 ng/ml, corresponding to a specific activity of > 2.0×10^7 IU/mg.
Shipping Condition	Gel pack.
Handling	Centrifuge the vial prior to opening.
Usage	For Research Use Only! Not to be used in humans.

Components and Storage

Components	10 μg	100 μg	500 μg
Recombinant Human IL-33	10 μg	100 μg	500 μg

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- 12 months from date of receipt, -20 to -70°C as supplied.
- 1 month, 2 to 8°C under sterile conditions after reconstitution.
- 3 months, -20 to -70°C under sterile conditions after reconstitution.

Quality Control

Purity	>97% by SDS-PAGE and HPLC analyses.
Endotoxin	Less than 1 EU/μg of rHuIL-33 as determined by LAL method.

Description

IL-33, encoded by IL-33 gene located on the Chr.9 in humans, is a 30 kDa proinflammatory protein belonging to the IL-1 superfamily and it shares less than 20 % a.a. sequence identity with other members. IL-33 secreted by high endothelial venules at high levels, which is found in tonsils, peyer patches and mesenteric lymph nodes, but not in placenta. It is upregulated in arterial smooth muscle, dermal fibroblasts, and keratinocytes following IL1α or IL1β stimulation. It elicits its biological effects by interacting with IL1RL1/ST2 and its stimulation recruits MYD88, IRAK1, IRAK4, and TRAF6, followed by phosphorylation of MAPK3/ERK1 and/or MAPK1/ERK2, MAPK14, and MAPK8. IL-33 mature protein has 52-58 % a.a. sequence identity with mouse and rat IL-33.

Reference

1. Liew FY, Pitman NI, McInnes IB. 2010. Nat Rev Immunol, 10: 103-10.

2. Miller AM, Xu D, Asquith DL, et al. 2008. J Exp Med, 205: 339-46.

3. Bourgeois E, Van LP, Samson M, et al. 2009. Eur J Immunol, 39: 1046-55.

4. Zhiguang X, Wei C, Steven R, et al. 2010. Immunol Lett, 131: 159-65.

5. Turnquist HR, Zhao Z, Rosborough BR, et al. 2011. J Immunol, 187: 4598-610.

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