

## Recombinant Rat IL-33

### Information

<b>Gene ID</b>	361749
<b>Accession #</b>	Q66H70
<b>Alternate Names</b>	IL-33
<b>Source</b>	<i>Escherichia coli</i> .
<b>M.Wt</b>	Approximately 17.4 kDa, a single non-glycosylated polypeptide chain containing 156 amino acids.
<b>AA Sequence</b>	SIQGTSLLTE SCALSTYNDQ SVSFVLENGC YVINVEDCGK NQEKDKVLLR YYESSFPAQS GDGVDGKKLM VNMSPIKDTD IWLNANDKDY SVELQKGDVS PPDQAFFVLH KKSSDFVSFE CKNLPGTYIG VKDNQLALVE ENDESCNNIM FKLSKM
<b>Appearance</b>	Sterile Filtered White lyophilized (freeze-dried) powder.
<b>Stability &amp; Storage</b>	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.
<b>Formulation</b>	Lyophilized from a 0.2 µm filtered concentrated solution in 20 mM Tris, 300 mM NaCl, pH 8.5.
<b>Reconstitution</b>	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.
<b>Biological Activity</b>	Fully biologically active when compared to standard. The ED <sub>50</sub> as determined by a cell proliferation assay using murine D10S cells is less than 0.5 ng/ml, corresponding to a specific activity of > 2.0 × 10 <sup>6</sup> IU/mg.
<b>Shipping Condition</b>	Gel pack.
<b>Handling</b>	Centrifuge the vial prior to opening.
<b>Usage</b>	For Research Use Only! Not to be used in humans.

### Components and Storage

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

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## Quality Control

Purity	> 95 % by SDS-PAGE and HPLC analyses.
Endotoxin	Less than 1 EU/μg of rRtIL-33 as determined by LAL method.

## Description

Interleukin-33 (IL-33), also known as NF-HEV and DVS 27, is a cytokine belonging to the IL-1 superfamily. It is also a proinflammatory protein that may regulate gene transcription and it induces helper T cells, mast cells, eosinophils and basophils to produce type 2 cytokines. The induction of type 2 cytokines by IL-33 in vivo is believed to induce the severe pathological changes observed in mucosal organs following administration of IL-33. IL-33 is constitutively expressed in smooth muscle and airway epithelia and it binds to a high-affinity receptor family member ST2. In vivo administration of mature IL-33 promotes increased production of IL-5, IL-13, IgE, and IgA, as well as splenomegaly and inflammatory infiltration of mucosal tissues. Recombinant rat IL-3 contains 156 amino acid residues and it shares 59 % a.a. and 90 % sequence identity with human and murine IL-33.

## Reference

1. Lingel A, Weiss TM, Niebuhr M, et al. 2009. Structure. 17:1398-410.
2. Baekkevold ES, Roussigne M, Yamanaka T, et al. 2003. Am J Pathol. 163:69-79.
3. Onda H, Kasuya H, Takakura K, et al. 1999. J Cereb Blood Flow Metab. 19:1279-88.
4. Black RA, Kronheim SR, Merriam JE, et al. 1989. J Biol Chem. 264:5323-6.

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**[www.apexbt.com](http://www.apexbt.com)**

7505 Fannin street, Suite 410, Houston, TX 77054.

Tel: +1-832-696-8203 | Fax: +1-832-641-3177 | Email: [info@apexbt.com](mailto:info@apexbt.com)