

## Recombinant human IL33

Catalog No: #AG0016

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## Description

Product Name	Recombinant human IL33
Host Species	E.coli
Purification	> 95% by Tris-Bis PAGE;> 95% by SEC-HPLC
Immunogen Description	Ser112-Thr270
Target Name	IL33
Other Names	Human IL-33, h-IL-33, rh-IL-33, recombinant IL-33, interleukin-33
Accession No.	Uniprot:O95760Gene ID:90865
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GeneID	90865
Target Species	human
Calculated MW	18.0 Kda
Tag Info	additional amino acid free
Formulation	0.22 µm filtered solution of PBS, pH 7.4.
Storage	Aliquot and store at -80°C. Avoid repeated freeze/thaw cycles.

## Background

IL-33, also known as NF-HEV and DVS 27, is a 30 kDa proinflammatory protein that may also regulate gene transcription (1?3). DVS 27 was identified as a gene that is upregulated in vasospastic cerebral arteries (1). NF?HEV was described as a nuclear factor that is preferentially expressed in the endothelial cells of high endothelial venules relative to endothelial cells from other tissues (2). IL?33 was identified based on sequence and structural homology with IL?1 family cytokines (3). DVS 27, NF?HEV, and IL?33 share 100% amino acid sequence identity. IL?33 is constitutively expressed in smooth muscle and airway epithelia. It is up-regulated in arterial smooth muscle, dermal fibroblasts, and keratinocytes following IL?1 alpha or IL?1 beta stimulation (1, 3). Similar to IL?1, IL?33 can be cleaved in vitro by caspase?1, generating an N?terminal fragment that is slightly shorter than the C?terminal fragment (3, 4). The N?terminal portion of full length IL?33 contains a predicted bipartite nuclear localization sequence and a homeodomain?like helix?turn?helix DNA binding domain. By immunofluorescence, full length IL?33 localizes to the nucleus in HUVECs and transfectants (2). The C?terminal fragment, corresponding to mature IL?33, binds and triggers signaling through mast cell IL?1 R4/ST2L, a longtime orphan receptor involved in the augmentation of Th2 cell responses (3, 5?7). A ternary signaling complex is formed by the subsequent association of IL?33 and ST2L with IL?1R AcP (8). Stimulation of Th2 polarized lymphocytes with mature IL?33 in vitro induces IL?5 and IL?13 secretion (3). 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 (3). Full length and mature human IL?33 share 52?58% aa sequence identity with mouse and rat IL?33. Human IL?33 shares less than 20% aa sequence identity with other IL?1 family proteins.

Note: This product is for in vitro research use only