

## Recombinant IL-33 Monoclonal Antibody

catalog number: **AN300184P**

**Note:** Centrifuge before opening to ensure complete recovery of vial contents.

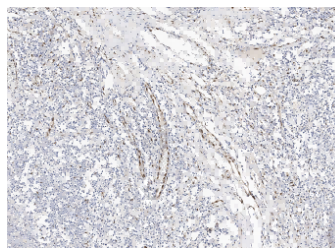
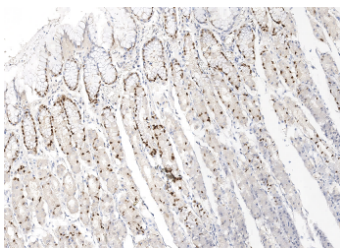
### Description

<b>Reactivity</b>	Human
<b>Immunogen</b>	Recombinant Human IL-33 Protein
<b>Host</b>	Rabbit
<b>Isotype</b>	IgG
<b>Clone</b>	4D10
<b>Purification</b>	Protein A
<b>Buffer</b>	0.2 µm filtered solution in PBS

### Applications Recommended Dilution

<b>IHC-P</b>	1:500-1:2000
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### Data



Immunohistochemistry of paraffin-embedded human stomach using IL-33 Monoclonal Antibody at dilution of 1:1000.      Immunohistochemistry of paraffin-embedded human tonsil using IL-33 Monoclonal Antibody at dilution of 1:1000.

### Preparation & Storage

<b>Storage</b>	This antibody can be stored at 2°C-8°C for one month without detectable loss of activity. Antibody products are stable for twelve months from date of receipt when stored at -20°C to -80°C. Preservative-Free. Avoid repeated freeze-thaw cycles.
<b>Shipping</b>	Ice bag

### Background

### For Research Use Only

IL-33, also known as NF-HEV and DVS 27, is a 30 kDa proinflammatory protein that may also regulate gene transcription. DVS 27 was identified as a gene that is upregulated in vasospastic cerebral arteries. 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. IL-33 was identified based on sequence and structural homology with IL-1 family cytokines. 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 upregulated in arterial smooth muscle, dermal fibroblasts, and keratinocytes following IL-1 alpha or IL-1 beta stimulation. 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. 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. 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. A ternary signaling complex is formed by the subsequent association of IL-33 and ST2L with IL-1R AcP. Stimulation of Th2 polarized lymphocytes with mature IL-33 in vitro induces IL-5 and IL-13 secretion. 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. 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.