

IL33 Rabbit pAb

Catalog # AP98867

Product Information

Application	IHC-P, IHC-F, IF
Primary Accession	Q8BVZ5
Other Accession	Q8BVZ5
Reactivity	Rat, Mouse
Host	Rabbit
Clonality	Polyclonal
Calculated MW	29991
Physical State	Liquid
Immunogen	KLH conjugated synthetic peptide derived from mouse IL-33
Epitope Specificity	185-264/264
Isotype	IgG
Purity	affinity purified by Protein A
Buffer	0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol.
SIMILARITY	Belongs to the IL-1 family. Highly divergent.
SUBUNIT	Forms a 1:1:1 heterotrimeric complex with its primary high-affinity receptor IL1RL1 and the coreceptor IL1RAP.
Post-translational modifications	Proteolytically converted to a mature form by CASP1 in vitro and calpains in vivo. Caspase-mediated proteolysis, once thought to activate IL33, rather acts as a switch to dampen its activity. Cathepsin G and elastase can cleave IL33 and generate highly active forms in activated neutrophils (IL-33(95-270), IL-33(99-270) and IL-33(109-270)). Proteolysis is not strictly required for biological activity.
Important Note	This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.
Background Descriptions	IL33 is a cytokine which belongs to the IL-1 superfamily, and it induces helper T cells to produce type 2 cytokines. This cytokine was previously named NF-HEV 'nuclear factor (NF) in high endothelial venules' (HEVs), as it was originally identified in these specialized cells. IL33 mediates its biological effects by interacting with the receptors ST2 and IL-1 Receptor Accessory Protein, activating intracellular molecules in the NF-kappaB and MAP kinase signaling pathways that drive production of type 2 cytokines (e.g. IL-4, IL-5 and IL-13) from polarized Th2 cells. The induction of type 2 cytokines by IL-33 in vivo is believed to induce the the severe pathological changes observed in mucosal organs following administration of IL33.

Additional Information

Gene ID	77125
Other Names	C9orf26; DVS27; IL1F11; NF-HEV; NFEHEV; 9230117N10Rik; IL-33; IL33_HUMAN; IL33; Interleukin-1 family member 11 (IL-1F11); Nuclear factor from high endothelial venules (NF-HEV); NFHEV; IL33_MOUSE; interleukin 33; chromosome 9 open reading frame 26 (NF-HEV); DVS27-related protein;

nuclear factor for high endothelial venules; interleukin-1 family, member 11

Dilution

IHC-P=1:100-500,IHC-F=1:100-500,IF=1:100-500

Storage

Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.

Protein Information

Name

IL33 {ECO:0000312 | MGI:MGI:1924375}

Function

Cytokine that binds to and signals through the IL1RL1/ST2 receptor which in turn activates NF-kappa-B and MAPK signaling pathways in target cells (PubMed:[29045903](#)). Involved in the maturation of Th2 cells inducing the secretion of T-helper type 2-associated cytokines (By similarity). Also involved in activation of mast cells, basophils, eosinophils and natural killer cells (By similarity). Acts as an enhancer of polarization of alternatively activated macrophages (By similarity). Acts as a chemoattractant for Th2 cells, and may function as an 'alarmin', that amplifies immune responses during tissue injury (By similarity). Induces rapid UCP2-dependent mitochondrial rewiring that attenuates the generation of reactive oxygen species and preserves the integrity of Krebs cycle required for persistent production of itaconate and subsequent GATA3-dependent differentiation of inflammation-resolving alternatively activated macrophages (PubMed:[34644537](#)).

Cellular Location

Nucleus. Chromosome {ECO:0000250 | UniProtKB:O95760}. Cytoplasm {ECO:0000250 | UniProtKB:O95760}. Cytoplasmic vesicle, secretory vesicle {ECO:0000250 | UniProtKB:O95760}. Secreted. Note=Secreted and released in the extracellular milieu by passing through the gasdermin-D (GSDMD) pore following cleavage by CELA1 (PubMed:35749514, PubMed:35794369) Associates with heterochromatin and mitotic chromosomes (By similarity). The secretion is dependent on protein unfolding and facilitated by the cargo receptor TMED10; it results in protein translocation from the cytoplasm into the ERGIC (endoplasmic reticulum- Golgi intermediate compartment) followed by vesicle entry and secretion (By similarity). {ECO:0000250 | UniProtKB:O95760, ECO:0000269 | PubMed:35749514, ECO:0000269 | PubMed:35794369}

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.