abcam

Product datasheet

Anti-IL-33 antibody [EPR17831] - BSA and Azide free ab229698

Recombinant RabMAb

1 References 4 Images

Overview

Product name	Anti-IL-33 antibody [EPR17831] - BSA and Azide free
Description	Rabbit monoclonal [EPR17831] to IL-33 - BSA and Azide free
Host species	Rabbit
Tested applications	**Suitable for:** Flow Cyt, WB, IHC-P, ICC/IF **Unsuitable for:** IP
Species reactivity	**Reacts with:** Mouse, Rat
Immunogen	Recombinant fragment aa 100 to the C-terminus. The exact sequence is proprietary. Database link: Q8BVZ5 Run BLAST with Run BLAST with
Positive control	IHC: Mouse spleen tissue. FC: RAW 264.7 cells
General notes	The formulation and the concentration of this product is compatible for metal-conjugation for mass cytometry (CyTOF®). ab229698 is a PBS-only buffer format of ab187060. Please refer to ab187060 for recommended dilutions, protocols, and image data. Use our conjugation kits for antibody conjugates that are ready-to-use in as little as 20 minutes with <1 minute hands-on-time and 100% antibody recovery: available for fluorescent dyes, HRP, biotin and gold. Our RabMAb® technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to RabMab® patents. This product is a recombinant rabbit monoclonal antibody.

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C. Avoid freeze / thaw cycle.
Storage buffer	Constituent: PBS
Purity	Protein A purified

Clonality	Monoclonal
Clone number	EPR17831
Isotype	IgG

Applications

Our Abpromise guarantee covers the use of **ab229698** in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
Flow Cyt		1/500.
WB		Use at an assay dependent concentration. Detects a band of approximately 33 kDa (predicted molecular weight: 30 kDa).
IHC-P		Use at an assay dependent concentration.
ICC/IF		Use at an assay dependent concentration.

Application notes Is unsuitable for IP.

Target

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:16286016). Involved in the maturation of Th2 cells inducing the secretion of T-helper type 2-associated cytokines. Also involved in activation of mast cells, basophils, eosinophils and natural killer cells. Acts as a chemoattractant for Th2 cells, and may function as an "alarmin", that amplifies immune responses during tissue injury (PubMed:17853410, PubMed:18836528).
In quiescent endothelia the uncleaved form is constitutively and abundantly expressed, and acts as a chromatin-associated nuclear factor with transcriptional repressor properties, it may sequester nuclear NF-kappaB/RELA, lowering expression of its targets (PubMed:21734074). This form is rapidely lost upon angiogenic or proinflammatory activation (PubMed:18787100).

Tissue specificity Expressed at high level in high endothelial venules found in tonsils, Peyer patches and mesenteric lymph nodes. Almost undetectable in placenta.

Sequence similarities Belongs to the IL-1 family. Highly divergent.

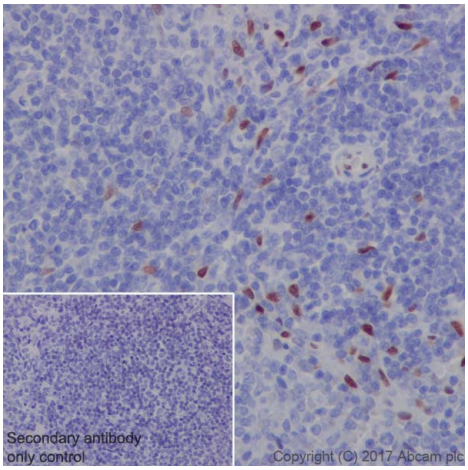
Domain The homeodomain-like HTH domain mediates nuclear localization and heterochromatin association.

Post-translational modifications The full length protein can be released from cells and is able to signal via the IL1RL1/ST2 receptor. However, proteolytic processing by CSTG/cathepsin G and ELANE/neutrophil elastase produces C-terminal peptides that are more active than the unprocessed full length protein. May also be proteolytically processed by calpains (PubMed:19596270). Proteolytic cleavage mediated by apoptotic caspases including CASP3 and CASP7 results in IL33 inactivation (PubMed:19559631). In vitro proteolytic cleavage by CASP1 was reported (PubMed:16286016) but could not be confirmed in vivo (PubMed:19465481) suggesting that IL33 is probably not a direct substrate for that caspase.

Cellular localization Nucleus. Chromosome. Cytoplasmic vesicle, secretory vesicle. Secreted. Associates with

heterochromatin and mitotic chromosomes (PubMed:17185418).

Images

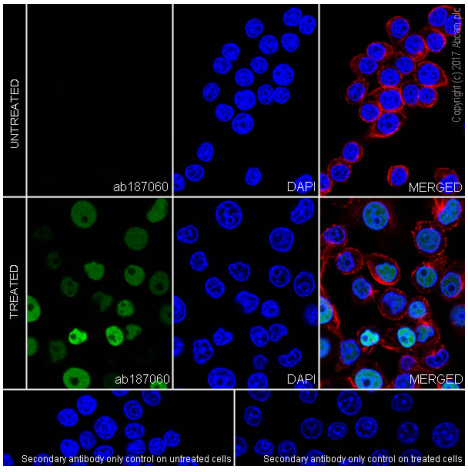


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-IL-33 antibody [EPR17831] - BSA and Azide free (ab229698)

Immunohistochemical analysis of paraffin-embedded rat spleen tissue labeling IL33 with ab187060 at 1/2000 dilution, followed by Rabbit specific IHC polymer detection kit HRP/DAB (ab209101), ready to use. Nuclear staining in endothelial cells of rat spleen is observed (PMID: 12819012). Counter stained with Hematoxylin.

Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is Rabbit specific IHC polymer detection kit HRP/DAB (ab209101), ready to use.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab187060).



Immunocytochemistry/ Immunofluorescence - Anti-IL-33 antibody [EPR17831] - BSA and Azide free (ab229698)

Immunofluorescent analysis of 4% paraformaldehyde-fixed, 0.1% Triton X-100 permeabilized RAW 264.7 (mouse macrophage cell line transformed with Abelson murine leukemia virus) cells labeling IL33 with ab187060 at 1/500 dilution, followed by Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) (ab150077) secondary antibody at 1/1000 dilution (green). Confocal image showing increased nuclear staining in RAW 264.7 cells treated with 50 nM Phorbol-12-myristate-13-acetate (PMA) and 5 µg/ml Lipopolysaccharide for 24h.

The nuclear counter stain is DAPI (blue). Tubulin is detected with Anti-alpha Tubulin antibody [DM1A] - Microtubule Marker (Alexa Fluor® 594) (ab195889) at 1/200 dilution (red).

Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) (ab150077) at 1/1000 dilution.

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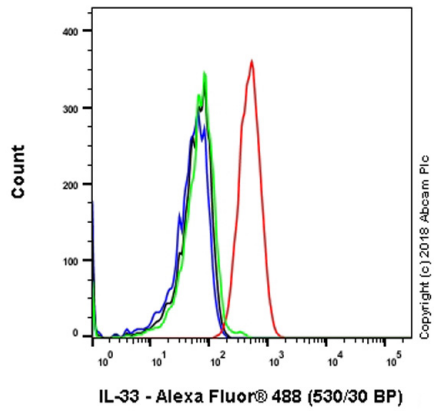
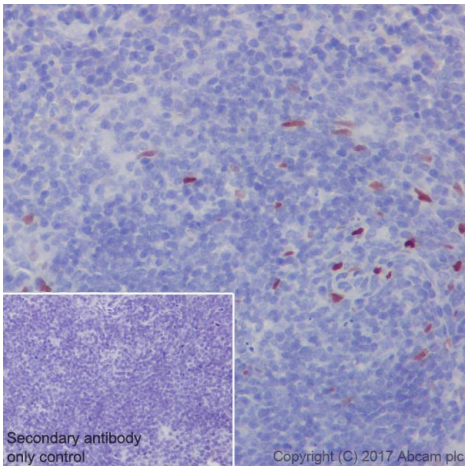


Flow Cytometry - Anti-IL-33 antibody [EPR17831] - BSA and Azide free (ab229698)

Flow Cytometry analysis of RAW 264.7 (Mouse Abelson murine leukemia virus-induced tumor macrophage) treated with 50nM PMA and 5µg/ml LPS for 24h (Red) / Untreated control (Green) labeling IL-33 with ab229698 at 1/500 dilution. Goat anti rabbit IgG (Alexa Fluor® 488, ab150077) at 1/2000 was used as the secondary antibody. Cells were fixed with 4% paraformaldehyde and permeabilised with 0.1% Tween-20. Isotype control - Rabbit monoclonal IgG (ab172730) (Black). Unlabelled control - Cell without incubation with primary antibody and secondary antibody (Blue).



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