abcam

Product datasheet

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

Recombinant RabMAb

2 References 6 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 (Intra), WB, IHC-P, ICC/IF **Unsuitable for:** IP
Species reactivity	**Reacts with:** Mouse, Rat
Immunogen	Recombinant fragment. This information is proprietary to Abcam and/or its suppliers.
Positive control	IHC: Mouse spleen tissue. Flow Cyt (intra): RAW 264.7 cells
General notes	ab229698 is the carrier-free version of **ab187060**. Our **carrier-free** antibodies are typically supplied in a PBS-only formulation, purified and free of BSA, sodium azide and glycerol. The carrier-free buffer and high concentration allow for increased conjugation efficiency. This conjugation-ready format is designed for use with fluorochromes, metal isotopes, oligonucleotides, and enzymes, which makes them ideal for antibody labelling, functional and cell-based assays, flow-based assays (e.g. mass cytometry) and Multiplex Imaging applications. 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. This product is compatible with the Maxpar® Antibody Labeling Kit from Fluidigm, without the need for antibody preparation. Maxpar® is a trademark of Fluidigm Canada Inc. This product is a recombinant monoclonal antibody, which offers several advantages including: - High batch-to-batch consistency and reproducibility - Improved sensitivity and specificity - Long-term security of supply - Animal-free production For more information **see here**. Our RabMAb® technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to **RabMAb® patents**.

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Store at +4°C. Do Not Freeze.
Storage buffer	pH: 7.2 Constituent: PBS
Carrier free	Yes
Purity	Protein A purified
Clonality	Monoclonal
Clone number	EPR17831
Isotype	IgG

Applications

The Abpromise guarantee 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 (Intra)		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).

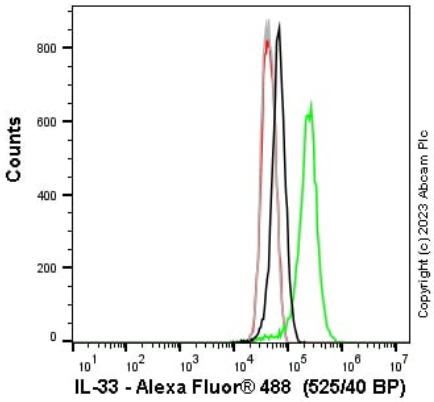
Tissue specificity Expressed at high level in high endothelial venules found in tonsils, Peyer patches and mesenteric lymph nodes. Almost undetectable in placenta.

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



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

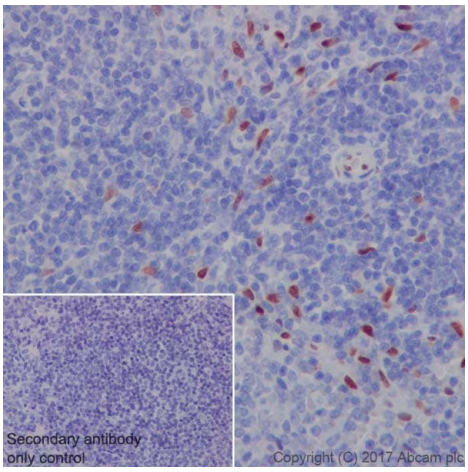
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (**ab187060**).

Flow cytometry overlay histogram showing left, Raw264.7 treated with 50nM PMA and 5µg/ml LPS for 24h and right, negative untreated Raw264.7 stained with **ab187060** (red line). The cells were fixed with 4% formaldehyde (10 min) and then permeabilised with 0.1% PBS-Triton X-100 for 15 min. The cells were then incubated in 1x PBS containing 10µg/ml anti CD16/CD32 and 10% normal goat serum to block FC receptors and non-specific protein-protein interaction followed by the antibody (**ab187060**) (1x 10^6 in 100µl at 1.0µg/ml (1/2090)) for 30min at 22°C.

The secondary antibody Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) preadsorbed was incubated at 1/4000 for 30min at 22°C

Isotype control antibody (black line) was Recombinant Rabbit IgG, monoclonal [EPR25A] - Isotype Control used at the same concentration and conditions as the primary antibody. Unlabelled sample (blue line) was also used as a control.

Acquisition of >5000 events were collected using a 50 mW Blue laser (488nm) and 525/40 bandpass filter.

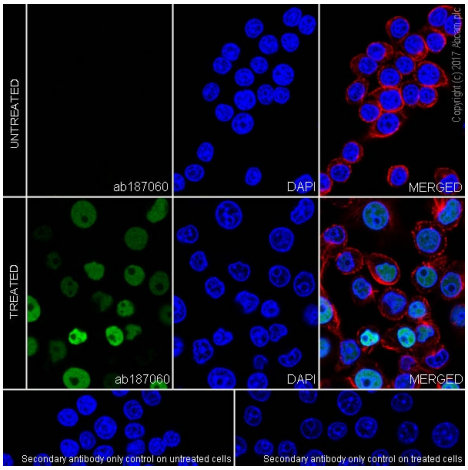


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-IL-33 antibody [EPR17831] - BSA and Azide free (ab229698)

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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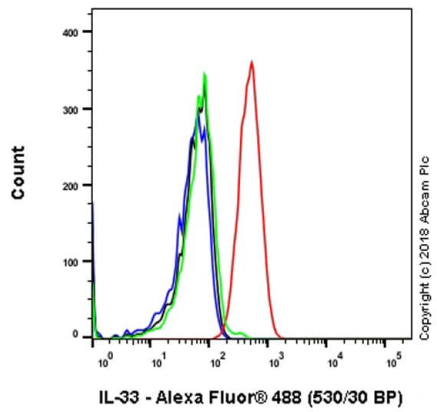
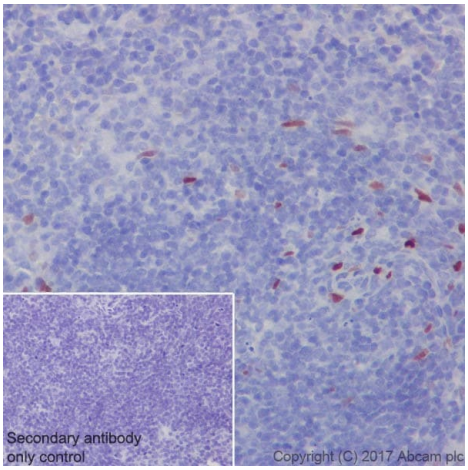


Flow Cytometry (Intracellular) - Anti-IL-33 antibody [EPR17831] - BSA and Azide free (ab229698)

Intracellular Flow Cytometry analysis ofRAW 264.7 (Mouse Abelson murine leukemia virus-induced tumor macrophage) treated with 50nM PMA and 5ï¿½g/ml LPS for 24h (Red) / Untreated control (Green) labeling IL-33 with ab229698 at 1/500 dilution. Goat anti rabbit IgG (Alexa Fluorï¿½488, **ab150077**) at 1/2000 was used as the secondary antibody. Cells were fixed with4% paraformaldehyde and permeabilised with0.1% 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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Anti-IL-33 antibody [EPR17831] - BSA and Azide free (ab229698)

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