

Product datasheet

Anti-IL-33 antibody [EPR17831] ab187060

Recombinant RabMAb

★★★★★ [2 Abreviews](#) [11 References](#) [8 Images](#)

Overview

Product name	Anti-IL-33 antibody [EPR17831]
Description	Rabbit monoclonal [EPR17831] to IL-33
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	WB: Rat and mouse lung tissue lysate; RAW 264.7 treated with 50 nM Phorbol-12-myristate-13-acetate (PMA) and 5 ug/ml lipopolysaccharide (LPS) for 24 hours, whole cell lysate. IHC-P: Mouse and rat spleen tissue. ICC/IF: RAW 264.7 treated with 50 nM Phorbol-12-myristate-13-acetate (PMA) and 5 ug/ml lipopolysaccharide (LPS) for 24 hours cells. Flow Cyt (intra): RAW 264.7 cells
General notes	<p>This product is a recombinant monoclonal antibody, which offers several advantages including:</p> <ul style="list-style-type: none">- High batch-to-batch consistency and reproducibility- Improved sensitivity and specificity- Long-term security of supply- Animal-free production <p>For more information see here.</p> <p>Our RabMAb[®] technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to RabMAb[®] patents.</p>

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	pH: 7.2 Preservative: 0.01% Sodium azide Constituents: PBS, 40% Glycerol, 0.05% BSA
Purity	Protein A purified

Clonality	Monoclonal
Clone number	EPR17831
Isotype	IgG

Applications

The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab187060 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		1/1000. Detects a band of approximately 33 kDa (predicted molecular weight: 30 kDa).
IHC-P	★★★★★ (1)	1/2000. Perform heat mediated antigen retrieval before commencing with IHC staining protocol. Antigen retrieval performed using Universal HIER antigen retrieval reagent (10X) (ab208572).
ICC/IF	★★★★★ (1)	1/500.

Application notes Is unsuitable for IP.

Target

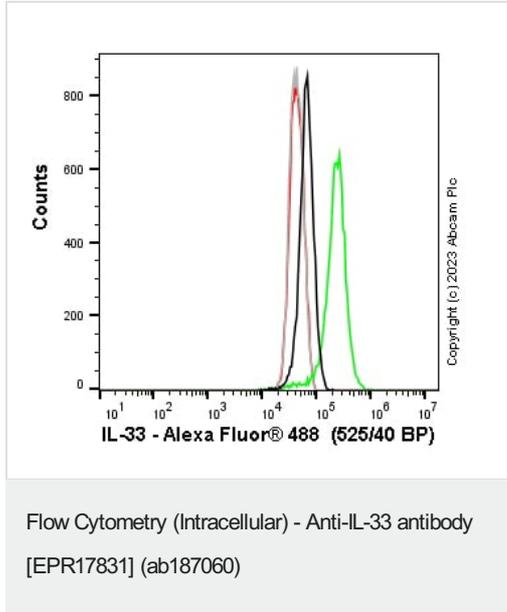
Function	<p>Cytokine that binds to and signals through the IL1RL1/ST2 receptor which in turn activates NF-kappa-B and MAPK signaling pathways in target cells (PubMed:16286016). Involved in the maturation of Th2 cells inducing the secretion of T-helper type 2-associated cytokines. Also involved in activation 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).</p> <p>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 rapidly lost upon angiogenic or proinflammatory activation (PubMed:18787100).</p>
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

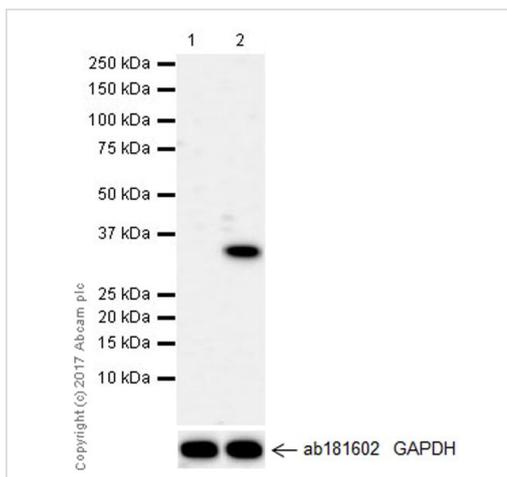


Flow cytometry overlay histogram showing left, Raw264.7 treated with 50nM PMA and 5µg/ml LPS for 24h and right, negative untreated Raw264.7 stained with ab187060 (red line). The cells were fixed with 4% formaldehyde (10 min) and then permeabilised with 0.1% PBS-Triton X-100 for 15 min. The cells were 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) (1×10^6 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.



All lanes : Anti-IL-33 antibody [EPR17831] (ab187060) at 1/1000 dilution

Lane 1 : RAW 264.7 (mouse macrophage cell line transformed with Abelson murine leukemia virus) whole cell lysate

Lane 2 : RAW 264.7 treated with 50 nM Phorbol-12-myristate-13-acetate (PMA) and 5 µg/ml lipopolysaccharide (LPS) for 24 hours, whole cell lysate

Lysates/proteins at 10 µg per lane.

Secondary

All lanes : Goat Anti-Rabbit IgG H&L (HRP) (**ab97051**)

Developed using the ECL technique.

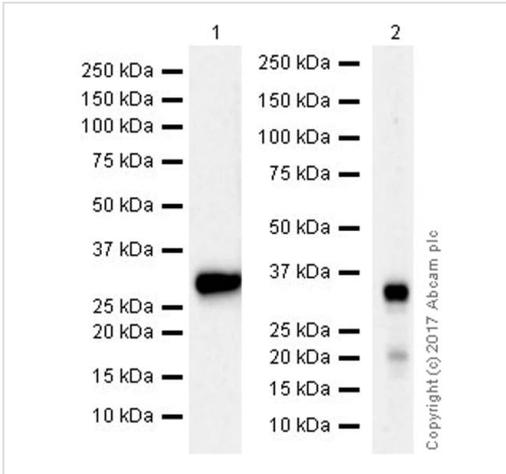
Predicted band size: 30 kDa

Observed band size: 33 kDa

Blocking/Dilution: 5% NFDm/TBST

Exposure: 3 minutes

IL-33 expression is induced by LPS treatment of PMA-differentiated RAW 264.7 cells (PMID 19559631; PMID 19933859).



Western blot - Anti-IL-33 antibody [EPR17831] (ab187060)

All lanes : Anti-IL-33 antibody [EPR17831] (ab187060) at 1/1000 dilution

Lane 1 : Rat lung tissue lysate at 20 µg

Lane 2 : Mouse lung tissue lysate at 10 µg

Secondary

Lane 1 : Goat Anti-Rabbit IgG H&L (HRP) ([ab97051](#)) at 1/100000 dilution

Lane 2 : Goat Anti-Rabbit IgG H&L (HRP) ([ab97051](#)) at 1/20000 dilution

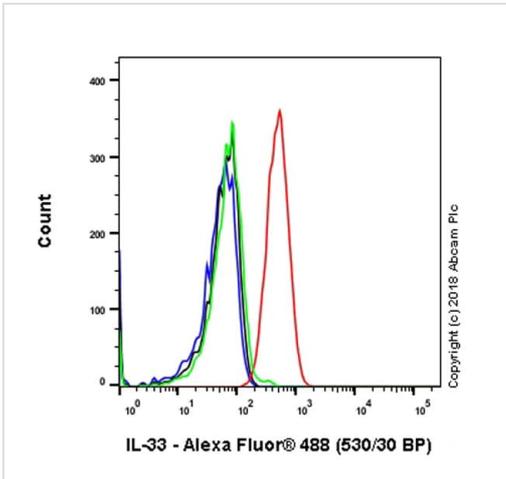
Developed using the ECL technique.

Predicted band size: 30 kDa

Observed band size: 30 kDa

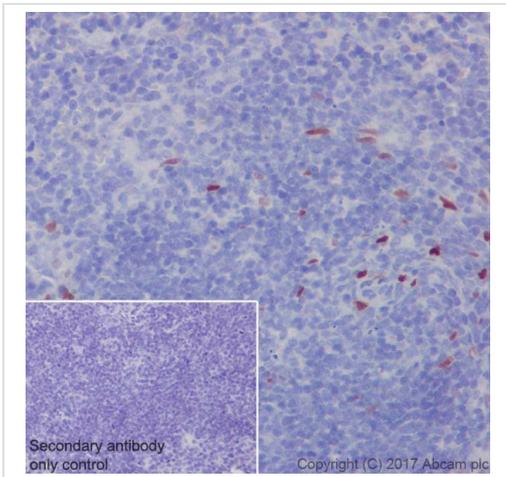
Blocking/Dilution: 5% NFDm/TBST

Exposure: 3 minutes



Flow Cytometry (Intracellular) - Anti-IL-33 antibody [EPR17831] (ab187060)

Intracellular 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 ab187060 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).

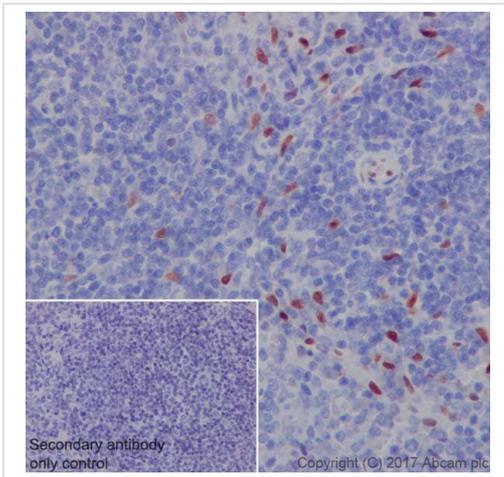


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-IL-33 antibody [EPR17831] (ab187060)

Immunohistochemical analysis of paraffin-embedded mouse 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 mouse 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.

Perform heat mediated antigen retrieval before commencing with IHC staining protocol.

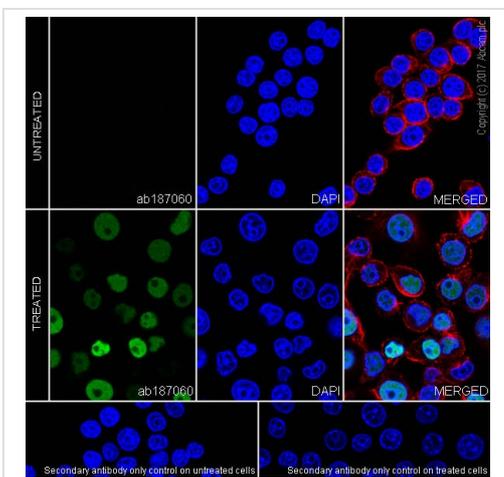


Immunohistochemical analysis of paraffin-embedded rat spleen tissue labeling IL33 with ab187060 at 1/2000 dilution, followed by Rabbit specific IHC polymer detection kit HRP/DAB (**ab209101**), ready to use. Nuclear staining in endothelial cells of rat spleen is observed (PMID: 12819012). Counter stained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

Perform heat mediated antigen retrieval before commencing with IHC staining protocol.

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-IL-33 antibody [EPR17831] (ab187060)



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.

Immunocytochemistry/ Immunofluorescence - Anti-IL-33 antibody [EPR17831] (ab187060)

Why choose a recombinant antibody?



Research with confidence
Consistent and reproducible results



Long-term and scalable supply
Recombinant technology



Success from the first experiment
Confirmed specificity



Ethical standards compliant
Animal-free production

Anti-IL-33 antibody [EPR17831] (ab187060)

Please note: All products are "FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES"

Our Abpromise to you: Quality guaranteed and expert technical support

- Replacement or refund for products not performing as stated on the datasheet
- Valid for 12 months from date of delivery
- Response to your inquiry within 24 hours
- We provide support in Chinese, English, French, German, Japanese and Spanish
- Extensive multi-media technical resources to help you
- We investigate all quality concerns to ensure our products perform to the highest standards

If the product does not perform as described on this datasheet, we will offer a refund or replacement. For full details of the Abpromise, please visit <https://www.abcam.com/abpromise> or contact our technical team.

Terms and conditions

- Guarantee only valid for products bought direct from Abcam or one of our authorized distributors