abcam

ab187060

Anti-IL-33 antibody [EPR17831]

Anti-IL-33 antibody [EPR17831] (ab187060) is a rabbit monoclonal antibody detecting IL-33 in **Western Blot, Flow Cytometry (Intra), IHC-P, ICC/IF**. Suitable for **Mouse, Rat**.

- KO validated for confirmed specificity
- Biophysical QC for unrivalled batch-batch consistency
- Over 10 publications

Recombinant | RabMAb | KO Validated | 20ul selling size

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	pH: 7.2 - 7.4 Preservative: 0.01% Sodium azide Constituents: PBS, 40% Glycerol (glycerin, glycerine), 0.05% BSA
Form	Liquid
Clonality	Monoclonal
Immunogen	The exact immunogen used to generate this antibody is proprietary information.
Clone number	EPR17831
Purification technique	Affinity purification Protein A
Concentration	0.502 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

IHC-P

Tested

Species	Mouse
Dilution info	1/2000
Notes	Antigen retrieval performed using Universal HIER antigen retrieval reagent (10X) (ab208572). Perform heat-mediated antigen retrieval before commencing with IHC staining protocol.

Species	Rat
Dilution info	1/2000
Notes	Antigen retrieval performed using Universal HIER antigen retrieval reagent (10X) (ab208572). Perform heat-mediated antigen retrieval before commencing with IHC staining protocol.

IP

Not recommended

Species	Mouse, Rat
Dilution info	-
Notes	-

WB

Tested

Species	Mouse
Dilution info	1/1000
Notes	-

Species	Rat
Dilution info	1/1000
Notes	-

ICC/IF

Tested

Species	Mouse

Dilution info	1/500
Notes	-

Expected

Species	Rat
Dilution info	Use at an assay dependent concentration.
Notes	-

Flow Cyt (Intra)

Tested

Species	Mouse
Dilution info	1/500
Notes	-

Expected

Species	Rat
Dilution info	Use at an assay dependent concentration.
Notes	-

Target data

See full target information Il33

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). 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 (By similarity). This form is rapidely lost upon angiogenic or pro-inflammatory activation (By similarity).

Storage

Shipped at conditions	Conditional Ambient
Appropriate short-term storage duration	1-2 weeks
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	-20°C
Aliquoting information	Upon delivery aliquot
Storage information	Avoid freeze / thaw cycle

Notes

What is this antibody validated in?
Anti-IL-33 antibody [EPR17831] (ab187060) is a rabbit recombinant monoclonal antibody and is validated for use in Western Blot (WB), Flow Cytometry (Intra), Immunohistochemistry (IHC-P), Immunocytochemistry/immunofluorescence (ICC/IF) in Mouse, Rat samples.

What is the molecular weight of IL-33?
Anti-IL-33 [EPR17831] (ab187060) specifically detects a band for IL-33 (UniProt: Q8BVZ5) at a molecular weight of 30kDa.

Trusted by the scientific community
Anti-IL-33 [EPR17831] (ab187060) was first used in a scientific publication in 2018 and has been cited over 10 times in peer-reviewed journals.

Specificity confirmed
The specificity of Anti-IL-33 antibody [EPR17831] (ab187060) has been confirmed by Western blot testing in Il33 Knockout Mouse Lung samples.

Other related products
We have a range of other formats of antibody clone [EPR17831] also available for your convenience: ab187060, Carrier free - ab229698, PE - ab282176, Alexa Fluor® 488 - ab283320, APC - ab317474

Patented technology
Our RabMAb® technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to RabMAb® patents.

What are the advantages of a recombinant monoclonal antibody?
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 batch production

For more information, read more on recombinant antibodies.

Trial sizes available!
Test your antibody or perform pre-screening before committing to a larger quantity. Sold in 20µl. Discover our selection of trial-size antibodies.

Product promise

Tested

We have tested this species and application combination and it works. It is covered by our product promise.

Expected

We have not tested this specific species and application combination in-house, but expect it will work. It is covered by our product promise.

Predicted

This species and application combination has not been tested, but we predict it will work based on strong homology. However, this combination is not covered by our product promise.

Not recommended

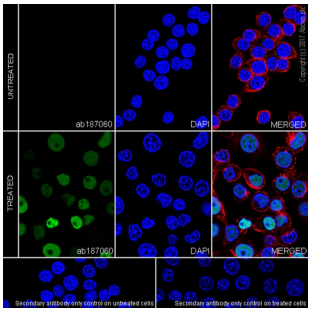
We do not recommend this combination. It is not covered by our product promise.

We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

In the unlikely event of one of our products not working as expected, you are covered by our product promise.

Full details and terms and conditions can be found here:
Terms & Conditions.

12 product images

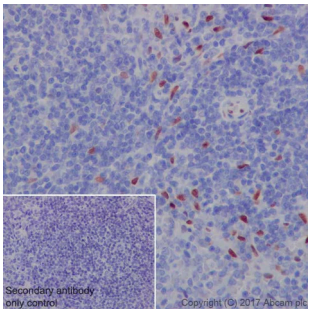


Immunocytochemistry/ Immunofluorescence - Anti-IL-33 antibody [EPR17831] (ab187060)

IL-33 Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-IL-33 antibody

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.

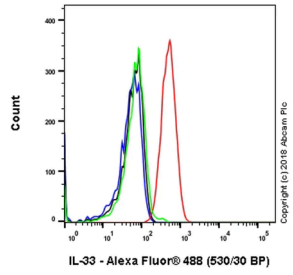


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-IL-33 antibody [EPR17831] (ab187060)

IL-33 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-IL-33 antibody

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.

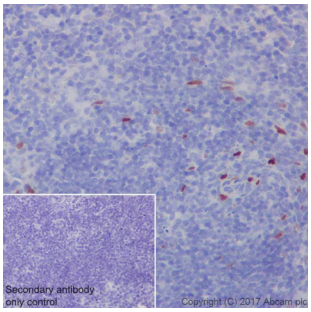
Perform heat mediated antigen retrieval before commencing with IHC staining protocol.



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

IL-33 Flow Cytometry (Intracellular) staining using rabbit Anti-IL-33 antibody

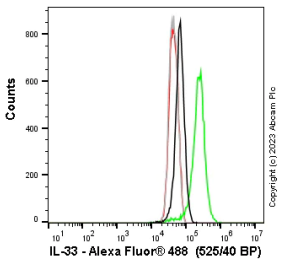
Intracellular Flow Cytometry analysis ofRAW 264.7 (Mouse Abelson murine leukemia virus-induced tumor macrophage) treated with 50nM PMA and 5µg/ml LPS for 24h (Red) / Untreated control (Green) labeling IL-33 with ab187060 at 1/500 dilution. Goat anti rabbit IgG (Alexa Fluor® 488, ab150077) at 1/2000 was used as the secondary antibody. Cells were fixed 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).



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.



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

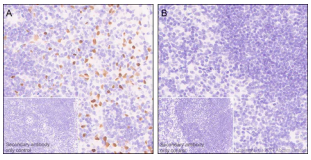
IL-33 Flow Cytometry (Intracellular) staining using rabbit Anti-IL-33 antibody

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 106 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

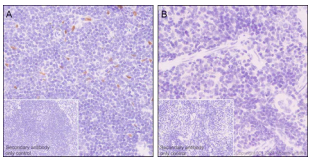
Isotype control antibody (black line) was Recombinant Rabbit IgG, monoclonal [EPR25A] - Isotype Control used at the same concentration and conditions as the primary antibody. Unlabelled sample (blue line) was also used as a control.

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



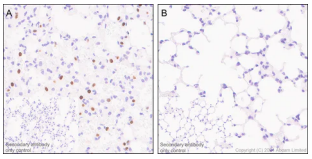
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-IL-33 antibody [EPR17831] (ab187060)

Immunohistochemical analysis of paraffin-embedded (A) Lymph node tissue from wild-type C57BL/6JGpt mice (B) Lymph node tissue from IL-33 knockout mice labeling IL33 with ab187060 at 1/5000 dilution, followed by LeicaDS9800 (Bond™ Polymer Refine Detection), ready to use. Counter stained with Hematoxylin. Antigen retrieval was heat mediated with Tris-EDTA buffer (pH 9.0, Epitope Retrieval Solution2) for 20 mins. Positive staining on (A) Lymph node tissue from wild-type C57BL/6JGpt mice and no staining on (B) Lymph node tissue from IL-33 knockout mice. The section was incubated with ab187060 for 30 mins at room temperature. The immunostaining was performed on a Leica Biosystems BOND® RX instrument. The tissue samples were kindly provided by GemPharmatech. C57BL/6JGpt wildtype mice and IL33-KO homozygous mice (Strain ID: T052437).



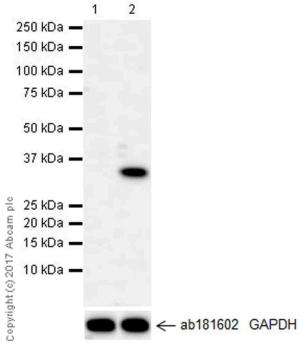
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-IL-33 antibody [EPR17831] (ab187060)

Immunohistochemical analysis of paraffin-embedded (A) Spleen tissue from wild-type C57BL/6JGpt mice (B) Spleen tissue from IL-33 knockout mice labeling IL33 with ab187060 at 1/5000 dilution, followed by LeicaDS9800 (Bond™ Polymer Refine Detection), ready to use. Counter stained with Hematoxylin. Antigen retrieval was heat mediated with Tris-EDTA buffer (pH 9.0, Epitope Retrieval Solution2) for 20 mins. Positive staining on (A) Spleen tissue from wild-type C57BL/6JGpt mice and no staining on (B) Spleen tissue from IL-33 knockout mice. The section was incubated with ab187060 for 30 mins at room temperature. The immunostaining was performed on a Leica Biosystems BOND® RX instrument. The tissue samples were kindly provided by GemPharmatech. C57BL/6JGpt wildtype mice and IL33-KO homozygous mice (Strain ID: T052437).



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

Immunohistochemical analysis of paraffin-embedded (A) Lung tissue from wild-type C57BL/6JGpt mice (B) Lung tissue from IL-33 knockout mice labeling IL33 with ab187060 at 1/5000 dilution, followed by LeicaDS9800 (Bond™ Polymer Refine Detection), ready to use. Counter stained with Hematoxylin. Antigen retrieval was heat mediated with Tris-EDTA buffer (pH 9.0, Epitope Retrieval Solution2) for 20 mins. Positive staining on (A) Lung tissue from wild-type C57BL/6JGpt mice and no staining on (B) Lung tissue from IL-33 knockout mice. The section was incubated with ab187060 for 30 mins at room temperature. The immunostaining was performed on a Leica Biosystems BOND® RX instrument. The tissue samples were kindly provided by GemPharmatech. C57BL/6JGpt wildtype mice and IL33-KO homozygous mice (Strain ID: T052437).



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

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).

All lanes:
Western blot - 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 at 10 µg

Lane 2:
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 at 10 µg

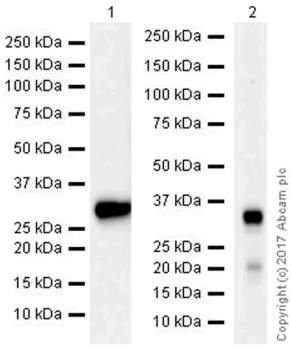
Secondary

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

Developed using the ECL technique.

Predicted band size: 30 kDa

Observed band size: 33 kDa



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

Blocking/Dilution: 5% NFDM/TBST
Exposure: 3 minutes

All lanes:
Western blot - 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

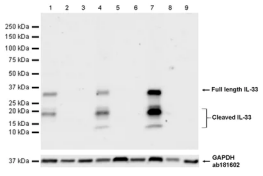
Lane 1:
Western blot - Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/100000 dilution

Lane 2:
Western blot - 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



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

Loading control: Anti-GAPDH antibody [EPR16891] - Loading Control (ab181602) (1/200000) (36KDa) Blocking/Diluting buffer and concentration: 5% NFDM/TBST The tissue samples were kindly provided by GemPharmatech. C57BL/6JGpt wildtype mice and IL33-KO homozygous mice (Strain ID: T052437).
Lanes 1 - 9:
Western blot - Anti-IL-33 antibody [EPR17831] (ab187060) at 1/1000 dilution

Lanes 1 - 9:
Western blot - Anti-IL-33 antibody [EPR17831] - BSA and Azide free (ab229698)

Lane 1:
Wild-type mouse spleen tissue lysate (male)

Lanes 2 - 3:
IL-33 knockout spleen tissue lysate (male)

Lane 4:
Wild-type mouse inguinal lymph nodes tissue lysate (male)

Lanes 5 - 6:
IL-33 knockout inguinal lymph nodes tissue lysate (male)

Lane 7:
Wild-type mouse submandibular lymph nodes tissue lysate (male)

Lanes 8 - 9:
IL-33 knockout submandibular lymph nodes tissue lysate (male)

Secondary

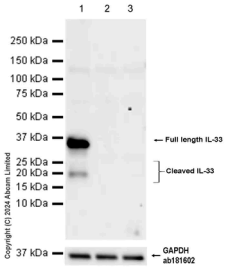
All lanes:

Western blot - Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/20000 dilution

Observed band size: 15-30 kDa

Exposure time: 38s

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



Loading control: Anti-GAPDH antibody [EPR16891] - Loading Control (ab181602) (1/200000) (36KDa) Blocking/Diluting buffer and concentration: 5% NFDM/TBST The tissue samples were kindly provided by GemPharmatech. C57BL/6JGpt wildtype mice and IL33-KO homozygous mice (Strain ID: T052437).
Lanes 1 - 3:
Western blot - Anti-IL-33 antibody [EPR17831] (ab187060)

Lanes 1 - 3:
Western blot - Anti-IL-33 antibody [EPR17831] - BSA and Azide free (ab229698)

Lane 1:
Wild-type mouse lung tissue lysate (male)

Lanes 2 - 3:
IL-33 knockout lung tissue lysate (male)

Secondary

All lanes:
Western blot - Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/20000 dilution

Observed band size: 15-30 kDa

Exposure time: 38s

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