

Product datasheet

Anti-IL-33 antibody [EPR20417] ab207737

Recombinant RabMAb

[7 References](#) [10 Images](#)

Overview

Product name	Anti-IL-33 antibody [EPR20417]
Description	Rabbit monoclonal [EPR20417] to IL-33
Host species	Rabbit
Tested applications	Suitable for: WB, IHC-P Unsuitable for: ICC/IF
Species reactivity	Reacts with: Rat, Human
Immunogen	Recombinant fragment. This information is proprietary to Abcam and/or its suppliers.
Positive control	WB: Human IL33 recombinant protein. THP-1 treated with Phorbol-12-myristate-13-acetate and LPS lysate. Human artery, lung, tonsil, stomach and colon lysate. His-tagged rat IL33 recombinant protein. Rat spleen, kidney and lung lysate. IHC-P: Rat lung and spleen tissue. Human tonsil tissue and kidney cancer tissue. ICC/IF: THP-1 cells.
General notes	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 short term (1-2 weeks). Upon delivery aliquot. Store at -20°C long term. Avoid freeze / thaw cycle.
Storage buffer	pH: 7.2 Preservative: 0.01% Sodium azide Constituents: PBS, 40% Glycerol (glycerin, glycerine), 0.05% BSA
Purity	Protein A purified
Clonality	Monoclonal
Clone number	EPR20417
Isotype	IgG

Applications

The Abpromise guarantee

Our **Abpromise guarantee** covers the use of ab207737 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
WB		1/1000. Predicted molecular weight: 30 kDa.
IHC-P		1/4000. Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol. Under our testing conditions we observed non-specific staining in some human tissues, customers are recommended to optimize IHC testing conditions.

Application notes

Is unsuitable for ICC/IF.

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 rapidly 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.

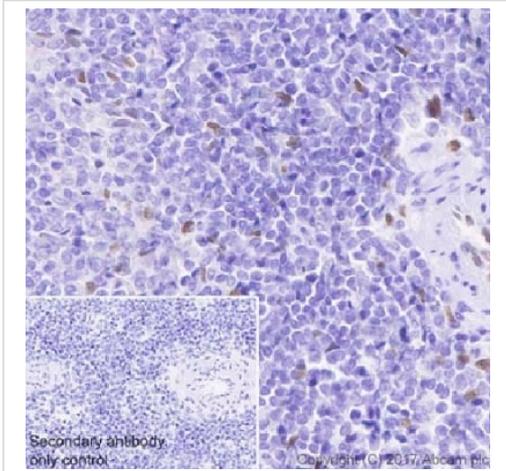
Post-translational modifications

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

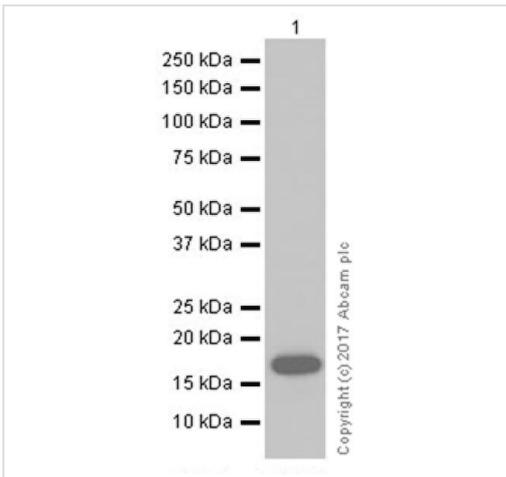


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-IL-33 antibody [EPR20417] (ab207737)

Immunohistochemical analysis of paraffin embedded rat spleen tissue labeling IL33 with ab207737 at 1/4000 dilution, followed by Goat Anti-Rabbit IgG H&L (HRP) ready to use. Nuclear staining on endothelium cells of rat spleen (PMID: 12819012, PMID: 18836528) is observed. Counter stained with hematoxylin.

Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is Goat Anti-Rabbit IgG H&L (HRP) ready to use.

Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.



Western blot - Anti-IL-33 antibody [EPR20417] (ab207737)

Anti-IL-33 antibody [EPR20417] (ab207737) at 1/1000 dilution + human IL33 recombinant protein (aa112-270), 10 ng

Secondary

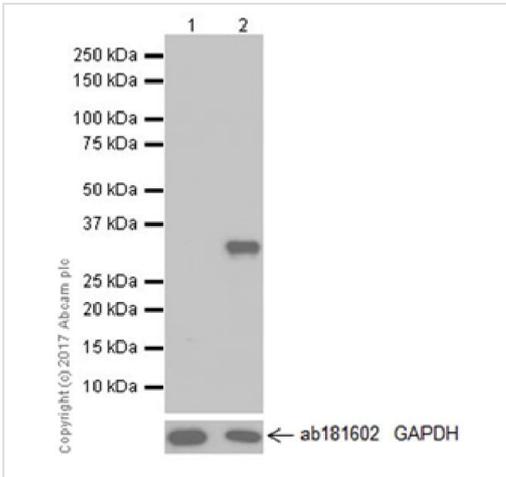
Goat Anti-Rabbit IgG H&L (HRP) ([ab97051](#)) at 1/100000 dilution

Predicted band size: 30 kDa

Observed band size: 18 kDa

Exposure time: 2 seconds

Blocking: 5% NFDm/TBST



Western blot - Anti-IL-33 antibody [EPR20417] (ab207737)

All lanes : Anti-IL-33 antibody [EPR20417] (ab207737) at 1/1000 dilution

Lane 1 : Untreated THP-1 (human monocytic leukemia monocyte), whole cell lysate

Lane 2 : THP-1 treated with 50 nM Phorbol-12-myristate-13-acetate (PMA, [ab120297](#)) and 5 ug/ml lipopolysaccharides (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](#)) at 1/50000 dilution

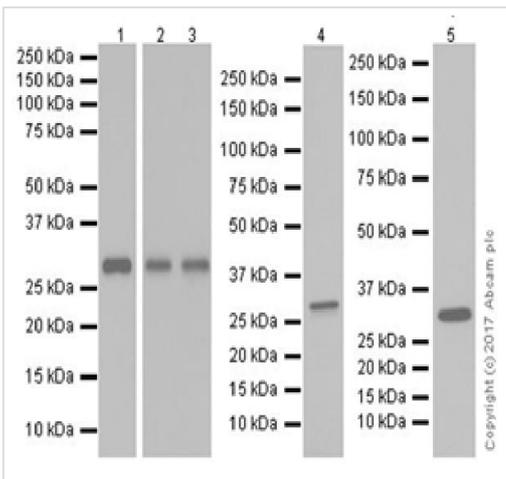
Predicted band size: 30 kDa

Observed band size: 33 kDa

Exposure time: 10 seconds

The level of IL33 expression can be induced by PMA and LPS treatment (PMID: 19559631).

Blocking : 5% NFDm/TBST



Western blot - Anti-IL-33 antibody [EPR20417] (ab207737)

All lanes : Anti-IL-33 antibody [EPR20417] (ab207737) at 1/1000 dilution

Lane 1 : Human artery

Lane 2 : Human lung

Lane 3 : Human tonsil

Lane 4 : Human stomach

Lane 5 : Human colon

Lysates/proteins at 20 µg per lane.

Secondary

All lanes : VeriBlot for IP Detection Reagent (HRP) ([ab131366](#)) at 1/1000 dilution

Predicted band size: 30 kDa

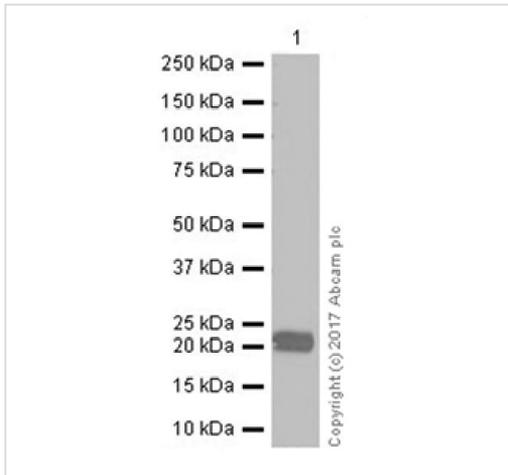
Observed band size: 33 kDa

Blocking: 5% NFDm/TBST

Exposure times:

Lanes 1-3,5: 3 minutes

Lanes 4: 30 seconds



Western blot - Anti-IL-33 antibody [EPR20417]
(ab207737)

Anti-IL-33 antibody [EPR20417] (ab207737) at 1/1000 dilution +
Recombinant Rat IL-33 protein ([ab207126](#))

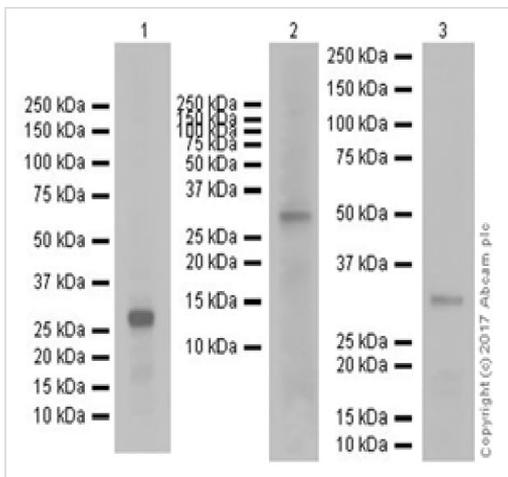
Secondary

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

Predicted band size: 30 kDa

Observed band size: 20 kDa

Exposure time: 3 minutes



Western blot - Anti-IL-33 antibody [EPR20417]
(ab207737)

All lanes : Anti-IL-33 antibody [EPR20417] (ab207737) at 1/1000
dilution

Lane 1 : Rat spleen

Lane 2 : Rat kidney

Lane 3 : Rat lung

Lysates/proteins at 10 µg per lane.

Secondary

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

Predicted band size: 30 kDa

Observed band size: 33 kDa

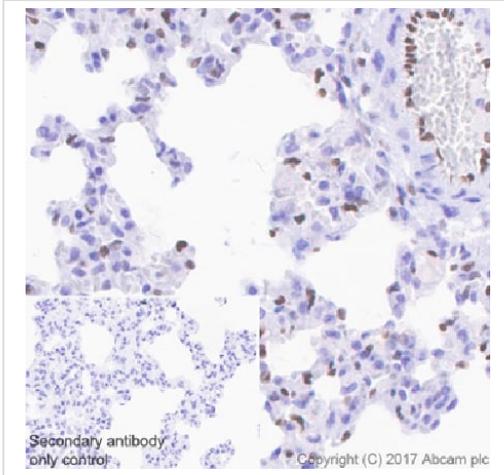
Blocking: 5% NFDm/TBST

Exposure times:

Lane 1: 3 seconds

Lane 2: 10 seconds

Lane3: 5 seconds

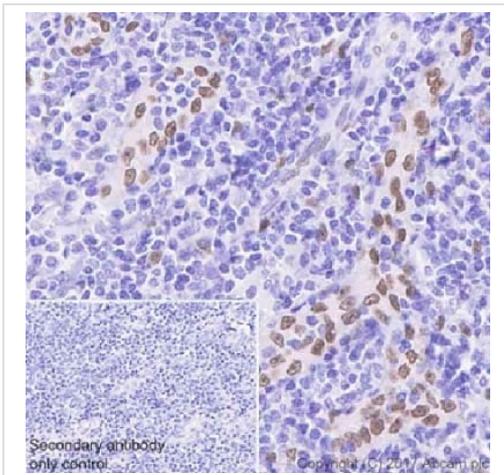


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-IL-33 antibody [EPR20417] (ab207737)

Immunohistochemical analysis of paraffin embedded rat lung tissue labeling IL33 with ab207737 at 1/4000 dilution, followed by Goat Anti-Rabbit IgG H&L (HRP) ready to use. Nuclear staining on epithelium and endothelium cells of rat lung (PMID: 18836528) is observed. Counter stained with hematoxylin.

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Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.

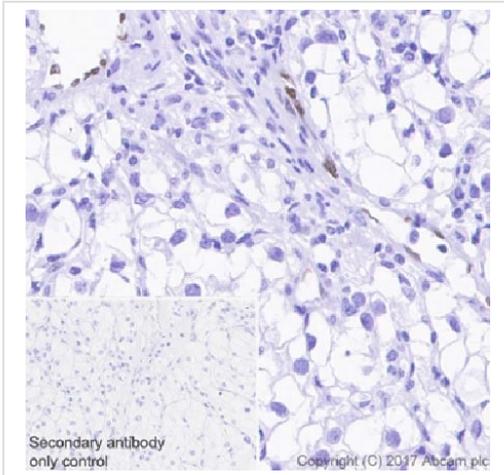


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-IL-33 antibody [EPR20417] (ab207737)

Immunohistochemical analysis of paraffin embedded human tonsil tissue labeling IL33 with ab207737 at 1/4000 dilution, followed by Goat Anti-Rabbit IgG H&L (HRP) ready to use. Nuclear staining on high endothelial venules of human tonsil (PMID: 12819012) is observed. Counter stained with hematoxylin.

Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is Goat Anti-Rabbit IgG H&L (HRP) ready to use.

Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.



Immunohistochemical analysis of paraffin embedded human kidney cancer tissue labeling IL33 with ab207737 at 1/4000 dilution, followed by Goat Anti-Rabbit IgG H&L (HRP) ready to use. Nuclear staining on endothelial cells of human kidney cancer (PMID: 12819012) is observed. Counter stained with hematoxylin.

Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is Goat Anti-Rabbit IgG H&L (HRP) ready to use.

Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-IL-33 antibody [EPR20417] (ab207737)

Why choose a recombinant antibody?

 <p>Research with confidence Consistent and reproducible results</p>	 <p>Long-term and scalable supply Recombinant technology</p>
 <p>Success from the first experiment Confirmed specificity</p>	 <p>Ethical standards compliant Animal-free production</p>

Anti-IL-33 antibody [EPR20417] (ab207737)

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