

Product datasheet

Anti-YKL-40/CHI3L1 antibody [EPR19078-157] ab255297

Recombinant RabMAb

6 Images

Overview

Product name	Anti-YKL-40/CHI3L1 antibody [EPR19078-157]
Description	Rabbit monoclonal [EPR19078-157] to YKL-40/CHI3L1
Host species	Rabbit
Tested applications	Suitable for: WB, IHC-P, Flow Cyt Unsuitable for: ICC/IF
Species reactivity	Reacts with: Human
Immunogen	Recombinant fragment within Human YKL-40/CHI3L1 aa 150 to the C-terminus. The exact sequence is proprietary. Database link: P36222
Positive control	WB: Human spleen tissue lysate; THP-1 (Human monocytic leukemia monocyte), U-87 MG (Human glioblastoma-astrocytoma epithelial cell), MG-63 (Human osteosarcoma fibroblast), Caco-2 (Human colorectal adenocarcinoma epithelial cell), 293T (Human embryonic kidney epithelial cell), and Jurkat (Human T cell leukemia T lymphocyte) whole cell lysates; IHC-P: Human spleen and tonsil tissue. Flow: THP-1 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> <p>Reproducibility is key to advancing scientific discovery and accelerating scientists' next breakthrough.</p> <p>Abcam is leading the way with our range of recombinant antibodies, knockout-validated antibodies and knockout cell lines, all of which support improved reproducibility.</p> <p>We are also planning to innovate the way in which we present recommended applications and species on our product datasheets, so that only applications & species that have been tested in our own labs, our suppliers or by selected trusted collaborators are covered by our Abpromise[™] guarantee.</p> <p>In preparation for this, we have started to update the applications & species that this product is</p>

Abpromise guaranteed for.

We are also updating the applications & species that this product has been “predicted to work with,” however this information is not covered by our Abpromise guarantee.

Applications & species from publications and Abreviews that have not been tested in our own labs or in those of our suppliers are not covered by the Abpromise guarantee.

Please check that this product meets your needs before purchasing. If you have any questions, special requirements or concerns, please send us an inquiry and/or contact our Support team ahead of purchase. Recommended alternatives for this product can be found below, as well as customer reviews and Q&As.

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, 0.05% BSA
Purity	Protein A purified
Clonality	Monoclonal
Clone number	EPR19078-157
Isotype	IgG

Applications

Our [Abpromise guarantee](#) covers the use of **ab255297** 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. Detects a band of approximately 42 kDa (predicted molecular weight: 43 kDa).
IHC-P		1/250. Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.
Flow Cyt		1/500.

Application notes Is unsuitable for ICC/IF.

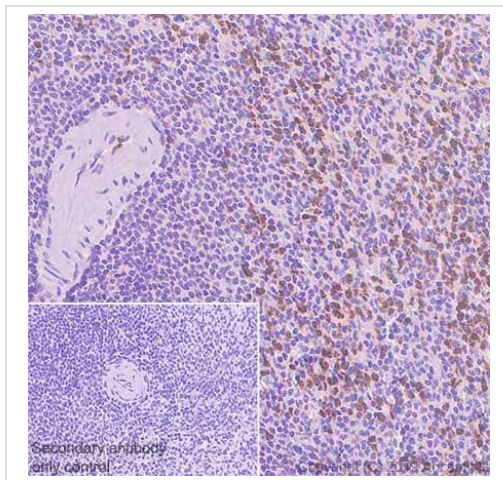
Target

Function Carbohydrate-binding lectin with a preference for chitin. May play a role in defense against pathogens, or in tissue remodeling. May play an important role in the capacity of cells to respond to and cope with changes in their environment.

Tissue specificity Present in activated macrophages, articular chondrocytes, synovial cells as well as in liver. Undetectable in muscle tissues, lung, pancreas, mononuclear cells, or fibroblasts.

Involvement in disease	A genetic variation in CHI3L1 is associated with susceptibility to asthma-related traits type 7 (ASRT7) [MIM:611960]. Asthma-related traits include clinical symptoms of asthma, such as coughing, wheezing and dyspnea, bronchial hyperresponsiveness (BHR) as assessed by methacholine challenge test, serum IgE levels, atopy, and atopic dermatitis.
Sequence similarities	Belongs to the glycosyl hydrolase 18 family.
Post-translational modifications	Glycosylated.
Cellular localization	Secreted > extracellular space.

Images



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-YKL-40/CHI3L1 antibody [EPR19078-157] (ab255297)

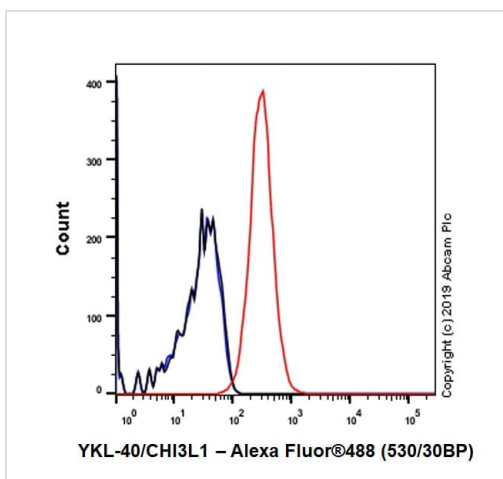
Immunohistochemical analysis of paraffin-embedded human spleen tissue labeling YKL-40/CHI3L1 with ab255297 at 1/250 dilution followed by ready to use Rabbit specific IHC polymer detection kit HRP/DAB (ab209101). Positive staining on neutrophils of human spleen is observed.

The section was incubated with ab255297 for 30 mins at room temperature.

The immunostaining was performed on a Leica Biosystems BOND[®] RX instrument. Counterstained with Hematoxylin.

Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0, epitope retrieval solution) for 20mins.

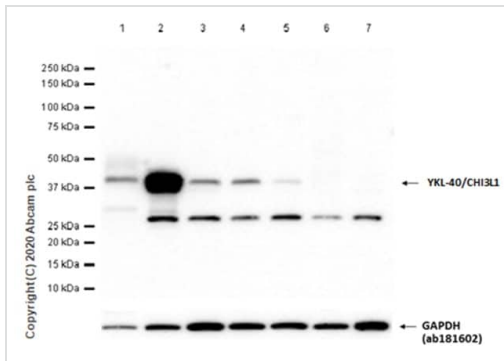
Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is ready to use Rabbit specific IHC polymer detection kit HRP/DAB (ab209101).



Flow Cytometry - Anti-YKL-40/CHI3L1 antibody [EPR19078-157] (ab255297)

Flow cytometric analysis of 4% paraformaldehyde-fixed, 90% methanol permeabilized THP-1 (human monocytic leukemia cell line) cells labelling YKL-40/CHI3L1 with ab255297 at 1/500 dilution (Red) compared with a Rabbit monoclonal IgG (ab172730, Black) isotype control and an unlabelled control (cells without incubation with primary antibody and secondary antibody) (Blue).

Goat anti rabbit IgG (Alexa Fluor[®] 488, ab150077) at 1/2000 dilution was used as the secondary antibody.



Western blot - Anti-YKL-40/CHI3L1 antibody [EPR19078-157] (ab255297)

All lanes : Anti-YKL-40/CHI3L1 antibody [EPR19078-157] (ab255297) at 1/1000 dilution

Lane 1 : Human spleen tissue lysate

Lane 2 : THP-1 (Human monocytic leukemia monocyte) whole cell lysate

Lane 3 : U-87 MG (Human glioblastoma-astrocytoma epithelial cell) whole cell lysate

Lane 4 : MG-63 (Human osteosarcoma fibroblast) whole cell lysate

Lane 5 : Caco-2 (Human colorectal adenocarcinoma epithelial cell) whole cell lysate

Lane 6 : 293T (Human embryonic kidney epithelial cell) whole cell lysate

Lane 7 : Jurkat (Human T cell leukemia T lymphocyte) whole cell lysate

Lysates/proteins at 20 µg per lane.

Secondary

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

Predicted band size: 43 kDa

Observed band size: 42 kDa

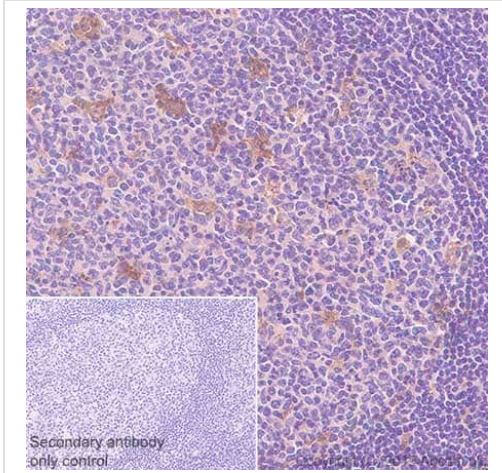
[why is the actual band size different from the predicted?](#)

Additional bands at: 27 kDa. We are unsure as to the identity of these extra bands.

Exposure time: 60 seconds

Blocking/Diluting buffer and concentration: 5% NFDN/TBST.

The expression profile observed in 293T and Jurkat are consistent with the literature (PMID: 19767768, PMID: 16472595).

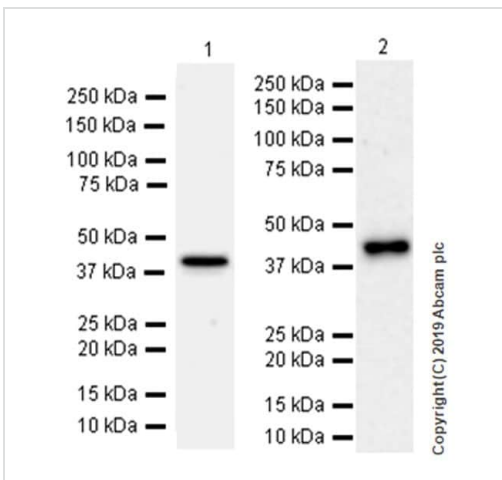


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-YKL-40/CHI3L1 antibody [EPR19078-157] (ab255297)

Immunohistochemical analysis of paraffin-embedded human tonsil tissue labeling YKL-40/CHI3L1 with ab255297 at 1/250 dilution followed by a ready to use Rabbit specific IHC polymer detection kit HRP/DAB (ab209101). Positive staining on macrophages in human tonsil germinal center is observed. The section was incubated with ab255297 for 30 mins at room temperature. The immunostaining was performed on a Leica Biosystems BOND® RX instrument. Counterstained with Hematoxylin.

Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0, epitope retrieval solution 2) for 20mins.

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



Western blot - Anti-YKL-40/CHI3L1 antibody [EPR19078-157] (ab255297)

All lanes : Anti-YKL-40/CHI3L1 antibody [EPR19078-157] (ab255297) at 1/1000 dilution

Lane 1 : Human spleen lysate

Lane 2 : THP-1 (human monocytic leukemia cell line) whole cell lysate

Lysates/proteins at 20 µg per lane.

Secondary

Lane 1 : VeriBlot for IP Detection Reagent (HRP) (ab131366) at 1/1000 dilution

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

Predicted band size: 43 kDa

Observed band size: 42 kDa [why is the actual band size different from the predicted?](#)

Blocking/Diluting buffer and concentration: 5% NFDM/TBST

Exposure time: 3 minutes

The molecular weight observed is consistent with what has been described in the literature (PMID 19414556).

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-YKL-40/CHI3L1 antibody [EPR19078-157]
(ab255297)

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

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