


## Product datasheet

### Anti-YKL-40/CHI3L1 antibody ab77528

★★★★☆ [2 Abreviews](#) [18 References](#) [4 Images](#)

#### Overview

<b>Product name</b>	Anti-YKL-40/CHI3L1 antibody
<b>Description</b>	Rabbit polyclonal to YKL-40/CHI3L1
<b>Host species</b>	Rabbit
<b>Tested applications</b>	<b>Suitable for:</b> WB, IHC-P, ICC
<b>Species reactivity</b>	<b>Reacts with:</b> Human <b>Predicted to work with:</b> Mouse, Orangutan 
<b>Immunogen</b>	Synthetic peptide corresponding to Human YKL-40/CHI3L1 aa 350 to the C-terminus (C terminal) conjugated to keyhole limpet haemocyanin. (Peptide available as <a href="#">ab88218</a> )
<b>Positive control</b>	This antibody gave a positive signal in THP1 Whole Cell Lysate. This antibody gave a positive result in IHC in the following FFPE tissue: Human normal tonsil. This antibody gave a positive result when used in the following formaldehyde fixed cell lines: U-87 MG.
<b>General notes</b>	<p>The Life Science industry has been in the grips of a reproducibility crisis for a number of years. Abcam is leading the way in addressing this with our range of recombinant monoclonal antibodies and knockout edited cell lines for gold-standard validation. Please check that this product meets your needs before purchasing.</p> <p>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, along with publications, customer reviews and Q&amp;As</p>

#### Properties

<b>Form</b>	Liquid
<b>Storage instructions</b>	Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C or -80°C. Avoid freeze / thaw cycle.
<b>Storage buffer</b>	pH: 7.40 Preservative: 0.02% Sodium azide Constituent: PBS
	Batches of this product that have a concentration < 1mg/ml may have BSA added as a stabilising agent. If you would like information about the formulation of a specific lot, please contact our scientific support team who will be happy to help.

<b>Purity</b>	Immunogen affinity purified
<b>Clonality</b>	Polyclonal
<b>Isotype</b>	IgG

## Applications

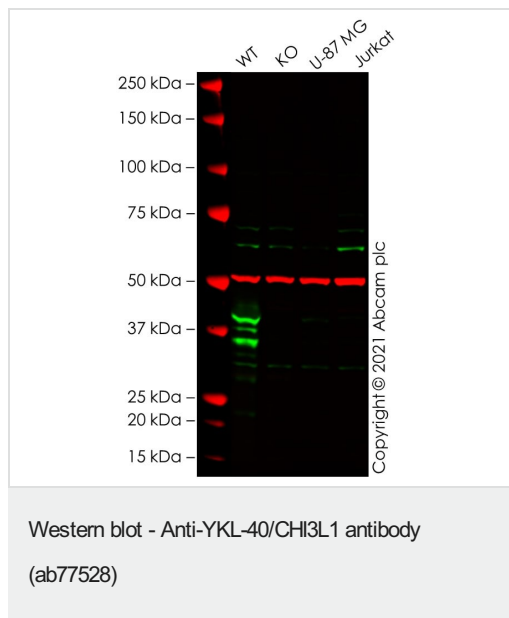
**The Abpromise guarantee** Our **Abpromise guarantee** covers the use of ab77528 in the following tested applications. The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
<b>WB</b>	★★★★★ (2)	Use a concentration of 1 µg/ml. Detects a band of approximately 45 kDa (predicted molecular weight: 43 kDa).
<b>IHC-P</b>		Use a concentration of 1 µg/ml. Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.
<b>ICC</b>		Use a concentration of 5 µg/ml.

## Target

<b>Function</b>	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.
<b>Tissue specificity</b>	Present in activated macrophages, articular chondrocytes, synovial cells as well as in liver. Undetectable in muscle tissues, lung, pancreas, mononuclear cells, or fibroblasts.
<b>Involvement in disease</b>	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.
<b>Sequence similarities</b>	Belongs to the glycosyl hydrolase 18 family.
<b>Post-translational modifications</b>	Glycosylated.
<b>Cellular localization</b>	Secreted > extracellular space.

## Images



**All lanes :** Anti-YKL-40/CHI3L1 antibody (ab77528) at 1 µg/ml

**Lane 1 :** Wild-type THP-1 cell lysate

**Lane 2 :** CHI3L1 knockout THP-1 cell lysate

**Lane 3 :** U-87 MG cell lysate

**Lane 4 :** Jurkat cell lysate

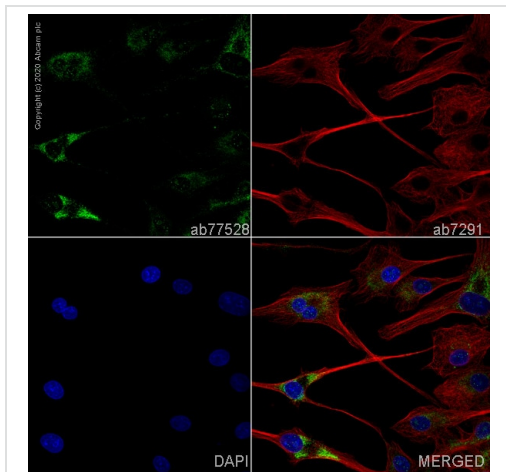
Lysates/proteins at 20 µg per lane.

Performed under reducing conditions.

**Predicted band size:** 43 kDa

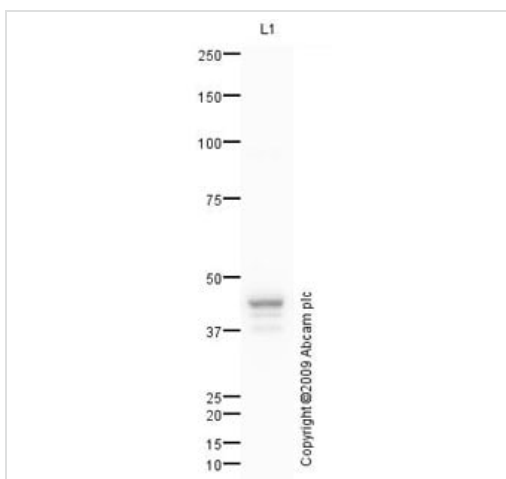
**Observed band size:** 33-42 kDa

False colour image of Western blot: Anti-YKL-40/CHI3L1 antibody staining at 1 ug/ml, shown in green; Mouse anti-Alpha Tubulin [DM1A] ([ab7291](#)) loading control staining at 1/20000 dilution, shown in red. In Western blot, ab77528 was shown to bind specifically to YKL-40/CHI3L1. A band was observed at 33-42 kDa in wild-type THP-1 cell lysates with no signal observed at this size in CHI3L1 knockout cell line [ab280038](#) (knockout cell lysate [ab280097](#)). To generate this image, wild-type and CHI3L1 knockout THP-1 cell lysates were analysed. First, samples were run on an SDS-PAGE gel then transferred onto a nitrocellulose membrane. Membranes were blocked in 3 % milk in TBS-0.1 % Tween® 20 (TBS-T) before incubation with primary antibodies overnight at 4 °C. Blots were washed four times in TBS-T, incubated with secondary antibodies for 1 h at room temperature, washed again four times then imaged. Secondary antibodies used were Goat anti-Rabbit IgG H&L (IRDye® 800CW) preabsorbed ([ab216773](#)) and Goat anti-Mouse IgG H&L (IRDye® 680RD) preabsorbed ([ab216776](#)) at 1/20000 dilution.



Immunocytochemistry - Anti-YKL-40/CHI3L1 antibody (ab77528)

ab77528 staining Chitinase-3-like protein 1 precursor in U-87 MG cells. The cells were fixed with 100% methanol (5 min), permeabilized with 0.1% PBS-Triton X-100 for 5 minutes and then blocked with 1% BSA/10% normal goat serum/0.3M glycine in 0.1%PBS-Tween for 1h. The cells were then incubated overnight at 4°C with ab77528 at 5µg/ml and **ab7291**, Mouse monoclonal [DM1A] to alpha Tubulin - Loading Control. Cells were then incubated with **ab150081**, Goat polyclonal Secondary Antibody to Rabbit IgG - H&L (Alexa Fluor® 488), pre-adsorbed at 1/1000 dilution (shown in green) and **ab150120**, Goat polyclonal Secondary Antibody to Mouse IgG - H&L (Alexa Fluor® 594), pre-adsorbed at 1/1000 dilution (shown in pseudocolour red). Nuclear DNA was labelled with DAPI (shown in blue).



Western blot - Anti-YKL-40/CHI3L1 antibody (ab77528)

Anti-YKL-40/CHI3L1 antibody (ab77528) at 1 µg/ml + THP1 (Human acute monocytic leukemia cell line) Whole Cell Lysate at 10 µg

### Secondary

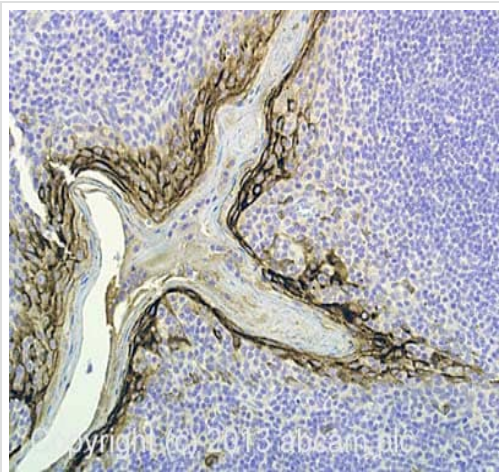
Goat polyclonal to Rabbit IgG - H&L - Pre-Adsorbed (HRP) at 1/3000 dilution

Developed using the ECL technique.

Performed under reducing conditions.

**Predicted band size:** 43 kDa

**Observed band size:** 45 kDa



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-YKL-40/CHI3L1 antibody (ab77528)

IHC image of YKL-40/CHI3L1 staining in Human normal tonsil formalin fixed paraffin embedded tissue section, performed on a Leica Bond™ system using the standard protocol F. The section was pre-treated using heat mediated antigen retrieval with sodium citrate buffer (pH6, epitope retrieval solution 1) for 20 mins. The section was then incubated with ab77528, 1µg/ml, for 15 mins at room temperature and detected using an HRP conjugated compact polymer system. DAB was used as the chromogen. The section was then counterstained with haematoxylin and mounted with DPX.

For other IHC staining systems (automated and non-automated) customers should optimize variable parameters such as antigen retrieval conditions, primary antibody concentration and antibody incubation times.

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