

Product datasheet

Anti-Alpha 1 microglobulin antibody ab47980

[2 Images](#)

Overview

Product name	Anti-Alpha 1 microglobulin antibody
Description	Rabbit polyclonal to Alpha 1 microglobulin
Host species	Rabbit
Tested applications	Suitable for: ICC/IF, IHC-P
Species reactivity	Reacts with: Human
Immunogen	Human Alpha 1 Microglobulin
General notes	<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&As</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 long term.
Storage buffer	<p>pH: 7.40</p> <p>Preservative: 0.02% Sodium azide</p> <p>Constituents: 49.98% PBS, 50% Glycerol (glycerin, glycerine)</p>
Purity	Protein G purified
Clonality	Polyclonal
Isotype	IgG

Applications

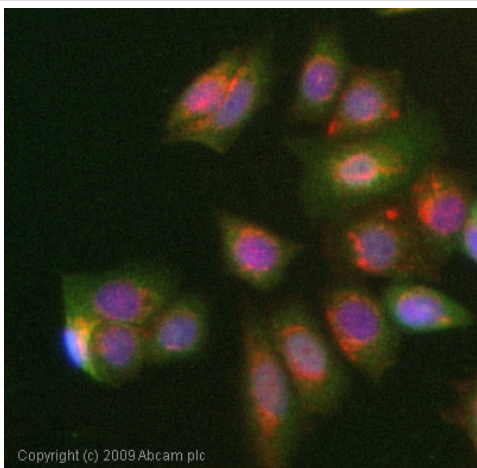
The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab47980 in the following tested applications. The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
ICC/IF		Use a concentration of 1 - 5 µg/ml.
IHC-P		Use a concentration of 4 µg/ml.

Target

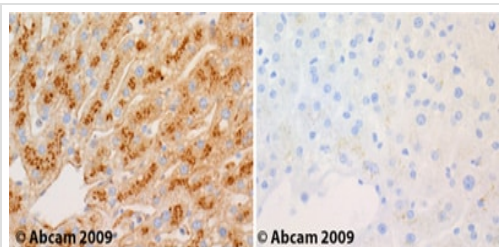
Function	<p>Inter-alpha-trypsin inhibitor inhibits trypsin, plasmin, and lysosomal granulocytic elastase. Inhibits calcium oxalate crystallization.</p> <p>Trypstatin is a trypsin inhibitor.</p>
Tissue specificity	<p>Expressed by the liver and secreted in plasma. Alpha-1-microglobulin occurs in many physiological fluids including plasma, urine, and cerebrospinal fluid. Inter-alpha-trypsin inhibitor is present in plasma and urine.</p>
Sequence similarities	<p>In the N-terminal section; belongs to the calycin superfamily. Lipocalin family.</p> <p>Contains 2 BPTI/Kunitz inhibitor domains.</p>
Post-translational modifications	<p>The precursor is proteolytically processed into separately functioning proteins.</p> <p>3-hydroxykynurenine, an oxidized tryptophan metabolite that is common in biological fluids, reacts with Cys-53, Lys-111, Lys-137, and Lys-149 to form heterogeneous polycyclic chromophores including hydroxanthommatin. The reaction by alpha-1-microglobulin is autocatalytic; the human protein forms chromophore even when expressed in insect and bacterial cells. The chromophore can react with accessible cysteines forming non-reducible thioether cross-links with other molecules of alpha-1-microglobulin or with other proteins such as Ig alpha-1 chain C region 'Cys-352'.</p> <p>Heavy chains are interlinked with bikunin via a chondroitin 4-sulfate bridge to the their C-terminal aspartate.</p> <p>Addition of glycosaminoglycan chondroitin sulfate, allows cross-linking between the different components.</p>
Cellular localization	<p>Secreted.</p>

Images



Immunocytochemistry/ Immunofluorescence - Anti-Alpha 1 microglobulin antibody (ab47980)

ICC/IF image of ab47980 stained MCF7 cells. The cells were 4% PFA fixed (10 min) and then incubated in 1%BSA / 10% normal goat serum / 0.3M glycine in 0.1% PBS-Tween for 1h to permeabilise the cells and block non-specific protein-protein interactions. The cells were then incubated with the antibody (ab47980, 1µg/ml) overnight at +4°C. The secondary antibody (green) was Alexa Fluor® 488 goat anti-rabbit IgG (H+L) used at a 1/1000 dilution for 1h. Alexa Fluor® 594 WGA was used to label plasma membranes (red) at a 1/200 dilution for 1h. DAPI was used to stain the cell nuclei (blue) at a concentration of 1.43µM.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Alpha 1 microglobulin antibody (ab47980)

ab47980 Microglobulin alpha 1 in human liver.

Left panel: with primary antibody at 4 ug/ml. Right panel: isotype control.

Sections were stained using an automated system (DAKO Autostainer Plus), at room temperature: sections were rehydrated and antigen retrieved with the Dako 3 in 1 AR buffers EDTA pH 9.0. Slides were peroxidase blocked in 3% H₂O₂ in methanol for 10 mins. They were then blocked with Dako Protein block for 10 minutes (containing casein 0.25% in PBS) then incubated with primary antibody for 20 min and detected with Dako envision flex amplification kit for 30 minutes. Colorimetric detection was completed with Diaminobenzidine for 5 minutes. Slides were counterstained with Haematoxylin and coverslipped under DePeX. Please note that for manual staining we recommend to optimize the primary antibody concentration and incubation time (overnight incubation), and amplification may be required.

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

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