abcam

ab288296

Anti-ADA2 antibody [EPR25430-131]

Recombinant | RabMAb | 20ul selling size

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	pH: 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	EPR25430-131
Purification technique	Affinity purification Protein A
Concentration	0.5 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	1/50
Notes	-

WB

Tested

Species	Human
Dilution info	1/1000
Notes	-

IHC-P

Tested

Species	Human
Dilution info	1/2000
Notes	-

ICC/IF

Not recommended

Species	Human
Dilution info	-
Notes	-

IP

Not recommended

Species	Human
Dilution info	-
Notes	-

Target data

See full target information ADA2

Function	Adenosine deaminase that may contribute to the degradation of extracellular adenosine, a signaling molecule that controls a variety of cellular responses. Requires elevated adenosine levels for optimal enzyme activity. Binds to cell surfaces via proteoglycans and may play a role in the regulation of cell proliferation and differentiation, independently of its enzyme activity.

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

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.

Supplementary info

This supplementary information is collated from multiple sources and compiled automatically.

Activity summary	Adenosine deaminase 2 (ADA2) also known as ADA002 ADA-DUA or ADA2 is a protein involved in immune regulation and inflammation. ADA2 has a molecular mass of approximately 59 kDa. This enzyme expresses mainly in monocytes macrophages and dendritic cells. Its function involves the conversion of adenosine

	to inosine a critical step in purine metabolism that impacts cell signaling and immune responses.
Biological function summary	ADA2 plays an important role in modulating immune system activity and inflammation. Unlike its counterpart ADA1 ADA2 does not function as a monomer but as part of a larger protein complex. It participates in the maturation and differentiation of monocytes into macrophages and dendritic cells influencing both innate and adaptive immune responses. ADA2's functions suggest it has an effect on the vascular and immune system health.
Pathways	ADA2 holds a significant place in the adenosine signaling pathway where it regulates the balance between adenosine and inosine levels. This balance affects the extracellular signaling pathways that influence immune cell activity. ADA2 also interacts with other proteins in the inflammatory pathways notably influencing cytokine activity. Through these pathways it shows regulatory connections with proteins like CD39 and CD73 which also engage in purinergic signaling.
Associated diseases and disorders	ADA2 plays an essential role in pathologies involving inflammation and immune dysregulation. Deficiency in ADA2 links to rare genetic disorders such as deficiency of ADA2 (DADA2) which presents with systemic inflammation vasculopathy and hematological abnormalities. In addition ADA2 shows involvement in conditions like rheumatoid arthritis where inflammation is a central feature. Its interaction with TNF-alpha and other pro-inflammatory cytokines positions ADA2 as a potential therapeutic target in inflammation-related diseases.

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

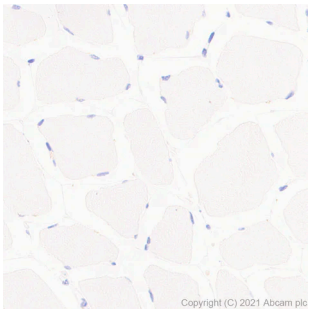
We do not recommend this combination. It is not covered by our product promise.

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:

6 product images

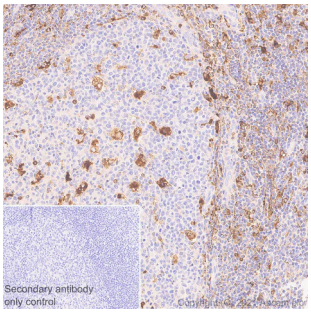


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-ADA2 antibody [EPR25430-131] (ab288296)

ADA2 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-ADA2 antibody

Immunohistochemical analysis of paraffin-embedded Human skeletal muscle tissue labelling ADA2 with ab288296 (0.259 µg/ml) at 1/2000 dilution followed by a ready to use LeicaDS9800 (Bond®, Polymer Refine Detection). Negative control: No staining on human skeletal muscle. The section was incubated with ab288296 for 30 mins at room temperature. The immunostaining was performed on a Leica Biosystems BOND® RX instrument. Counterstained with Hematoxylin. Secondary antibody only control: Secondary antibody is a ready to use LeicaDS9800 (Bond®, Polymer Refine Detection) was used.

Antigen Retrieval: Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0, epitope retrieval solution2) for 20 mins

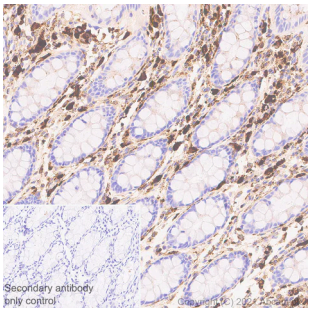


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-ADA2 antibody [EPR25430-131] (ab288296)

ADA2 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-ADA2 antibody

Immunohistochemical analysis of paraffin-embedded Human tonsil tissue labelling ADA2 with ab288296 at 1/2000 dilution followed by a ready to use LeicaDS9800 (Bond®, Polymer Refine Detection). Cytoplasmic staining on human tonsil. The section was incubated with ab288296 for 30 mins at room temperature. The immunostaining was performed on a Leica Biosystems BOND® RX instrument. Counterstained with Hematoxylin.
Secondary antibody only control: Secondary antibody is a ready to use LeicaDS9800 (Bond®, Polymer Refine Detection).

Antigen Retrieval: Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0, epitope retrieval solution2) for 20 mins



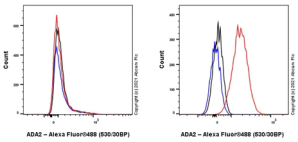
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-ADA2 antibody [EPR25430-131] (ab288296)

ADA2 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-ADA2 antibody

Immunohistochemical analysis of paraffin-embedded Human colon tissue labelling ADA2 with ab288296 (0.259 µg/ml) at 1/2000 dilution followed by a ready to use LeicaDS9800 (Bond®, Polymer Refine Detection). Cytoplasmic staining on human colon. The section was incubated with ab288296 for 30 mins at room temperature. The immunostaining was performed on a Leica Biosystems BOND® RX instrument. Counterstained with Hematoxylin.

Secondary antibody only control: Secondary antibody is a ready to use LeicaDS9800 (Bond®, Polymer Refine Detection).

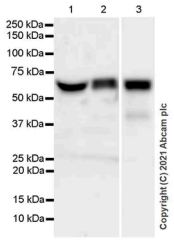
Antigen Retrieval: Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0, epitope retrieval solution2) for 20 mins



Flow Cytometry (Intracellular) - Anti-ADA2 antibody [EPR25430-131] (ab288296)

ADA2 Flow Cytometry (Intracellular) staining using rabbit Anti-ADA2 antibody

Flow cytometric analysis of 4% paraformaldehyde fixed 90% methanol permeabilized HUVEC (human umbilical vein endothelial cell, Left) / MOLT-4 (human lymphoblastic leukemia T lymphoblast, Right) cells labelling ADA2 with ab288296 at 1/50 dilution (1µg)(Red) compared with a Rabbit monoclonal IgG (ab172730) (Black) isotype control and an unlabeled control (cells without incubation with primary antibody and secondary antibody) (Blue). A Goat Anti-Rabbit IgG (Alexa Fluor® 488, ab150081) at 1/2000 dilution was used as the secondary antibody.
Low expression: HUVEC (PMID: 24552284, 32743071).



Western blot - Anti-ADA2 antibody [EPR25430-131] (ab288296)

ADA2 Western blot staining using rabbit Anti-ADA2 antibody

Blocking and diluting buffer and concentration: 5% NFDM/TBST
Exposure time: Lane 1-2: 70 seconds; Lane 3: 7.75 seconds

All lanes:
Western blot - Anti-ADA2 antibody [EPR25430-131] (ab288296) at 1/1000 dilution

Lane 1:
Human plasma at 20 µL

Lane 2:
Human heart tissue lysate at 20 µg

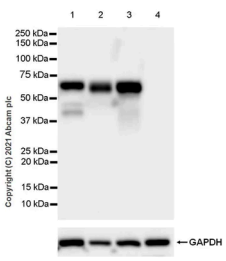
Lane 3:
Human lung tissue lysate at 20 µg

Secondary

All lanes:
Goat Anti-Rabbit IgG (HRP) with minimal cross-reactivity with human IgG at 1/2000 dilution

Predicted band size: 58 kDa

Observed band size: 58 kDa



Western blot - Anti-ADA2 antibody [EPR25430-131] (ab288296)

ADA2 Western blot staining using rabbit Anti-ADA2 antibody

Blocking and diluting buffer and concentration: 5% NFDM/TBST
Low expression: HUVEC(PMID: 24552284, 32743071)

Exposure time: 5.5 seconds

All lanes:

Western blot - Anti-ADA2 antibody [EPR25430-131] (ab288296) at 1/1000 dilution

Lane 1:
MOLT-4 (human lymphoblastic leukemia T lymphoblast) whole cell lysate at 20 µg

Lane 2:
THP-1 (human monocytic leukemia monocyte) whole cell lysate at 20 µg

Lane 3:
U937 (human histiocytic lymphoma monocyte) whole cell lysate at 20 µg

Lane 4:
HUVEC (human umbilical vein endothelial cell) whole cell lysate at 20 µg

Secondary

All lanes:
Goat Anti-Rabbit IgG (HRP) with minimal cross-reactivity with human IgG at 1/2000 dilution

Predicted band size: 58 kDa

Observed band size: 58 kDa

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