abcam

# ab288305

# Anti-ADA2 antibody [EPR25430-131] - BSA and Azide free

Recombinant | RabMAb

## Key facts

| | |
|---|---|
| **Isotype** | IgG |
| **Host species** | Rabbit |
| **Storage buffer** | Constituents: PBS |
| **Form** | Liquid |
| **Clonality** | Monoclonal |
| **Immunogen** | The exact immunogen used to generate this antibody is proprietary information. |
| **Carrier free** | Yes |
| **Clone number** | EPR25430-131 |
| **Purification technique** | Affinity purification Protein A |
| **Concentration** | 1.027 mg/mL The concentration of this product may be batch-dependent<br>Batch concentration finder → |

## Reactivity data

## Flow Cyt (Intra)

### Tested

| | |
|---|---|
| **Species** | Human |
| **Dilution info** | - |

| | |
|---|---|
| **Notes** | - |

## IHC-P

### Tested

| | |
|---|---|
| **Species** | Human |
| **Dilution info** | - |
| **Notes** | - |

## WB

### Tested

| | |
|---|---|
| **Species** | Human |
| **Dilution info** | - |
| **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** | Blue Ice |
| **Appropriate short-term storage conditions** | +4°C |
| **Appropriate long-term storage conditions** | +4°C |

## 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.

**Conjugation ready**
Our carrier-free antibodies are typically supplied in a PBS-only formulation, purified and free of BSA, sodium azide and glycerol. This conjugation-ready format is designed for use with fluorochromes, metal isotopes, oligonucleotides, and enzymes, which makes them ideal for antibody labelling, functional and cell-based assays, flow-based assays (e.g. mass cytometry) and Multiplex Imaging applications.

Use our conjugation kits for antibody conjugates that are ready-to-use in as little as 20 minutes with 1 minute hands-on-time and 100% antibody recovery: available for fluorescent dyes, HRP, biotin and gold.

**Compatibility**
This product is compatible with the Maxpar® Antibody Labeling Kit from Fluidigm, without the need for antibody preparation. Maxpar® is a trademark of Fluidigm Canada Inc.

## 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**

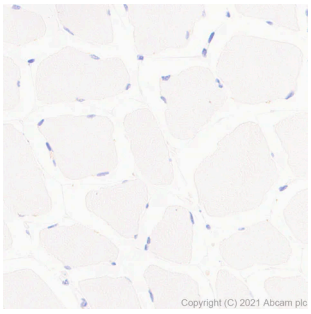
We do not recommend this combination. It is not covered by our product promise.

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:
Terms & Conditions.

## 6 product images



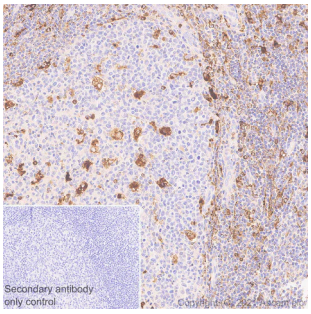

### Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-ADA2 antibody [EPR25430-131] - BSA and Azide free (ab288305)

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

This data was developed using 288296, the same antibody clone in a different buffer formulation. 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



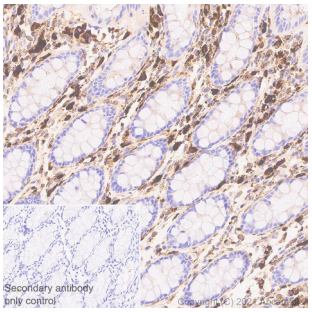

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ADA2 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-ADA2 antibody

This data was developed using 288296, the same antibody clone in a different buffer formulation. 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



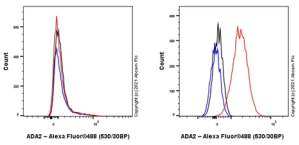

## Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-ADA2 antibody [EPR25430-131] - BSA and Azide free (ab288305)

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

This data was developed using 288296, the same antibody clone in a different buffer formulation. 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).

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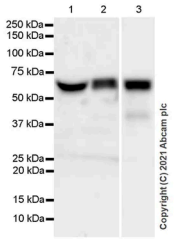



## Flow Cytometry (Intracellular) - Anti-ADA2 antibody [EPR25430-131] - BSA and Azide free (ab288305)

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

This data was developed using 288296, the same antibody clone in a different buffer formulation. 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] - BSA and Azide free (ab288305)

ADA2 Western blot staining using rabbit Anti-ADA2 antibody

This data was developed using 288296, the same antibody clone in a different buffer formulation. 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

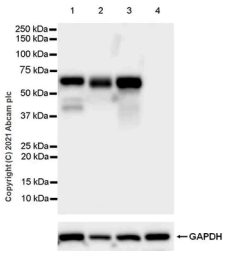
Lane 3:
Human lung tissue lysate at 20 µg

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] - BSA and Azide free (ab288305)

ADA2 Western blot staining using rabbit Anti-ADA2 antibody

This data was developed using 288296, the same antibody clone in a different buffer formulation. 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'.