abcam

ab288161

Anti-CD73 antibody [EPR25191-104] - BSA and Azide free

Recombinant | RabMAb

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	pH: 7.2 - 7.4 Constituents: PBS
Form	Liquid
Clonality	Monoclonal
Immunogen	The exact immunogen used to generate this antibody is proprietary information.
Carrier free	Yes
Clone number	EPR25191-104
Purification technique	Affinity purification Protein A
Concentration	1.035 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

ICC/IF

Tested

Species	Mouse
Dilution info	-

Notes	-

Not recommended

Species	Human, Rat
Dilution info	-
Notes	-

IP

Tested

Species	Mouse
Dilution info	-
Notes	-

Not recommended

Species	Human, Rat
Dilution info	-
Notes	-

Flow Cyt

Tested

Species	Mouse
Dilution info	-
Notes	-

Not recommended

Species	Human, Rat
Dilution info	-
Notes	-

WB

Tested

Species	Mouse
Dilution info	-
Notes	-

Not recommended

Species	Human, Rat
Dilution info	-
Notes	-

IHC-P

Not recommended

Species	Mouse, Human, Rat
Dilution info	-
Notes	-

Target data

See full target information Nt5e

Function	Catalyzes the hydrolysis of nucleotide monophosphates, releasing inorganic phosphate and the corresponding nucleoside (PubMed:8224905). Hydrolyzes IMP (PubMed:8224905). Shows a preference for ribonucleotide monophosphates over their equivalent deoxyribose forms (By similarity). Although AMP is the preferred substrate can also hydrolyze UMP, GMP, CMP, dAMP, dCMP, dTMP, NAD and NMN (By similarity).

Storage

Shipped at conditions	Blue Ice
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	+4°C

Notes

ab288161 is the carrier free version of ab288154

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	CD73 also known as ecto-5'-nucleotidase is an enzyme that functions at the cellular level. The CD73 protein hydrolyzes extracellular nucleotides into nucleosides by removing phosphate groups. It is a 70 kDa glycosylphosphatidylinositol-anchored molecule found on the surface of various cell types including endothelial cells lymphocytes and epithelial cells. Its presence is noted in a wide range of tissues across the human body highlighting its versatile role in cellular communication and metabolism.
Biological function summary	CD73 participates in the regulation of purinergic signaling through adenosine production. It acts in cooperation with other cell surface enzymes such as CD39 forming a functional complex that handles ATP breakdown to adenosine. This enzymatic activity modulates immune responses tissue protection and inflammation control. In addition to immune-related functions CD73 supports the maintenance of vascular integrity and proper cellular adhesion which is important in different physiological and pathological contexts.

Pathways	CD73 plays an important part in the adenosinergic pathway governing the conversion of AMP into adenosine. This activity impacts the signaling and function of the adenosine receptors on immune and non-immune cells. Another important pathway is the angiogenesis process where CD73 contributes by affecting endothelial cell migration and blood vessel development. Relationships with key proteins such as adenosine A2 receptors help facilitate these critical pathway activities.
Associated diseases and disorders	CD73's involvement with immunosuppression and tumor progression becomes significant. Elevated levels of CD73 are frequently observed in some cancers where it aids in creating a favorable tumor microenvironment through increased adenosine production. This situation assists tumor cells in evading immune detection. Additionally CD73 is linked to autoimmune diseases like multiple sclerosis where it contributes to modulated lymphocyte activity. Connections with proteins such as TGF-beta further illustrate its role in disease-related pathways creating potential targets for therapeutic interventions through the use of anti-CD73 antibodies.

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

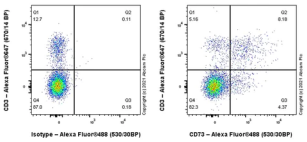
We do not recommend this combination. It is not covered by our product promise.

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

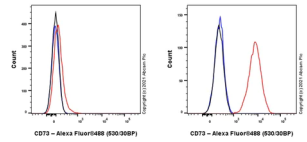


Flow Cytometry - Anti-CD73 antibody [EPR25191-104] - BSA and Azide free (ab288161)

CD73 Flow Cytometry staining using rabbit Anti-CD73 antibody

This data was developed using ab288154, the same antibody clone in a different buffer formulation.
Flow cytometric analysis of Mouse splenocytes cells labelling CD73 with ab288154 at 1/500 dilution (0.1ug) (Right) compared with a Rabbit monoclonal IgG (ab172730) (Left) isotype control. Goat Anti-Rabbit IgG (Alexa Fluor® 488, ab150081) at 1/2000 dilution was used as the secondary antibody.

Cells were stained with rat IgG or ab288154. Then stained with anti-CD3 conjugated to Alexa Fluor® 647. Gated on viable cells.

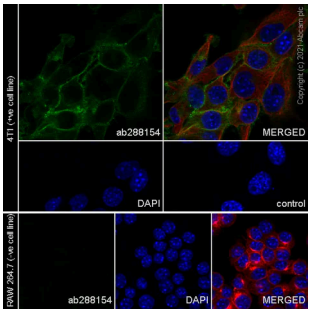


Flow Cytometry - Anti-CD73 antibody [EPR25191-104] - BSA and Azide free (ab288161)

CD73 Flow Cytometry staining using rabbit Anti-CD73 antibody

This data was developed using ab288154, the same antibody clone in a different buffer formulation.
Flow cytometric analysis of RAW 264.7 (Mouse Abelson murine leukemia virus-induced tumor macrophage, Left) / 4T1 (Mouse mammary gland carcinoma epithelial cell, Right) cells labelling CD73 with ab288154 at 1/500 dilution (0.1ug)(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 Fluo 488, ab150081) at 1/2000 dilution was used as the secondary antibody. Gated on viable cells.

Negative control: RAW 264.7(PMID:28060378).

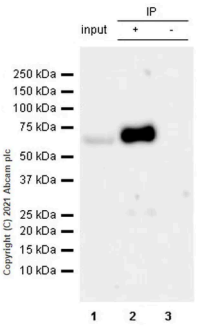


Immunocytochemistry/ Immunofluorescence - Anti-CD73 antibody [EPR25191-104] - BSA and Azide free (ab288161)

CD73 Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-CD73 antibody

This data was developed using ab288154, the same antibody clone in a different buffer formulation.
Immunofluorescent analysis of 4% Paraformaldehyde-fixed, 0.1% TritonX-100 permeabilized 4T1 cells labelling CD73 with ab288154 at 1/500 (1.038 ug/ml) dilution, followed by ab150081 Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) preadsorbed antibody at 1/1000 dilution (Green). Confocal image showing membranous staining in 4T1 cells and no staining in RAW 264.7 cells. **Negative control:** RAW264.7(PMID: 28060378). ab195889 Anti-alpha Tubulin mouse monoclonal antibody - Microtubule Marker (Alexa Fluor® 594) was used to counterstain tubulin at 1/200 dilution (Red). The Nuclear counterstain was DAPI (Blue).

Secondary antibody only control: Secondary antibody is ab150081 Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) preadsorbed at 1/1000 dilution.



Immunoprecipitation - Anti-CD73 antibody [EPR25191-104] - BSA and Azide free (ab288161)

This data was developed using ab288154, the same antibody clone in a different buffer formulation.
CD73 was immunoprecipitated from 0.35 mg 4T1 (mouse mammary gland carcinoma epithelial cell) whole cell lysate with ab288154 at 1/30 dilution (2ug in 0.35mg lysates). Western blot was performed on the immunoprecipitate using ab288154 at 1/1000 dilution. VeriBlot for IP secondary antibody(HRP)(ab131366) was used at 1/5000 dilution.

Lane 1: 4T1 (mouse mammary gland carcinoma epithelial cell) whole cell lysate 10 ug

Lane 2: ab288154 IP in 4T1 whole cell lysate

Lane 3: Rabbit monoclonal IgG (ab172730) instead of ab288154 in 4T1 whole cell lysate

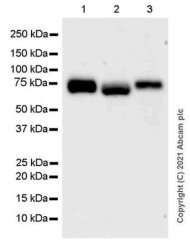
Blocking and dilution buffer and concentration: 5% NFDM/TBST.

Exposure time: 41 seconds

All lanes:
Immunoprecipitation - Anti-CD73 antibody [EPR25191-104] (ab288154)

Predicted band size: 63 kDa

Observed band size: 70 kDa



Western blot - Anti-CD73 antibody [EPR25191-104] - BSA and Azide free (ab288161)

CD73 Western blot staining using rabbit Anti-CD73 antibody

This data was developed using ab288154, the same antibody clone in a different buffer formulation.
Blocking and diluting buffer and concentration: 5% NFDM/TBST

Exposure time: 81 seconds

All lanes:
Western blot - Anti-CD73 antibody [EPR25191-104] (ab288154) at 1/1000 dilution

Lane 1:
Mouse bladder tissue lysate at 20 µg

Lane 2:
Mouse lung tissue lysate at 20 µg

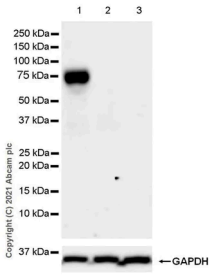
Lane 3:
Mouse liver tissue lysate at 20 µg

Secondary

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

Predicted band size: 63 kDa

Observed band size: 70 kDa



Western blot - Anti-CD73 antibody [EPR25191-104] - BSA and Azide free (ab288161)

CD73 Western blot staining using rabbit Anti-CD73 antibody

This data was developed using ab288154, the same antibody clone in a different buffer formulation.
Blocking and diluting buffer and concentration: 5% NFDM/TBST

The observed MW/expression profile is consistent with what has been described in the literature (PMID:28399915;21533188).

Negative control: RAW264.7, J774A.1 (PMID:28060378)

Exposure time: 81 seconds

All lanes:
Western blot - Anti-CD73 antibody [EPR25191-104] (ab288154) at 1/1000 dilution

Lane 1:
4T1 (mouse mammary gland carcinoma epithelial cell) whole cell lysate at 20 µg

Lane 2:
RAW264.7 (mouse Abelson murine leukemia virus-induced tumor macrophage) whole cell lysate at 20 µg

Lane 3:
J774A.1 (mouse reticum cell sarcoma monocyte macrophage) whole cell lysate at 20 µg

Secondary

All lanes:
Western blot - Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/100000 dilution

Predicted band size: 63 kDa

Observed band size: 70 kDa

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