abcam

ab257311

Anti-CD73 antibody [NT5E/2545]

Key facts

Isotype	IgG1
Host species	Mouse
Storage buffer	pH: 7.2 - 7.4 Preservative: 0.05% Sodium azide Constituents: PBS, 0.05% BSA
Form	Liquid
Clonality	Monoclonal
Immunogen	Recombinant Full Length Protein corresponding to Human NT5E. Database link P21589
Clone number	NT5E/2545
Purification technique	Affinity purification Protein A/G
Light chain type	kappa
Concentration	0.2 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →
Purification notes	Purified from bioreactor concentrate.

Reactivity data

Flow Cyt

Tested

Species	Human
Dilution info	1-2 µg for 10^6 Cells

Notes	-

Not recommended

Species	Recombinant full length protein - Human
Dilution info	-
Notes	-

WB

Tested

Species	Human
Dilution info	1-2 µg/mL
Notes	-

Not recommended

Species	Recombinant full length protein - Human
Dilution info	-
Notes	-

Protein Array

Tested

Species	Recombinant full length protein - Human
Dilution info	-
Notes	-

Expected

Species	Human
Dilution info	Use at an assay dependent concentration.
Notes	-

ICC/IF

Tested

Species	Human
Dilution info	1-2 µg/mL
Notes	-

Not recommended

Species	Recombinant full length protein - Human
Dilution info	-
Notes	-

IHC-P

Tested

Species	Human
Dilution info	1-2 µg/mL
Notes	Perform heat-mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.

Not recommended

Species	Recombinant full length protein - Human
Dilution info	-
Notes	-

Target data

See full target information NT5E

Function	Catalyzes the hydrolysis of nucleotide monophosphates, releasing inorganic phosphate and the corresponding nucleoside, with AMP being the preferred substrate (PubMed:21933152, PubMed:22997138, PubMed:23142347, PubMed:24887587, PubMed:34403084). Shows a preference for ribonucleotide monophosphates over their equivalent deoxyribose forms (PubMed:34403084). Other substrates include IMP, UMP, GMP, CMP, dAMP, dCMP, dTMP, NAD and NMN (PubMed:21933152, PubMed:22997138, PubMed:23142347, PubMed:24887587, PubMed:34403084).

Storage

Shipped at conditions	Blue Ice
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

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

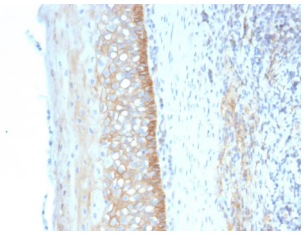
We do not recommend this combination. It is not covered by our product promise.

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.

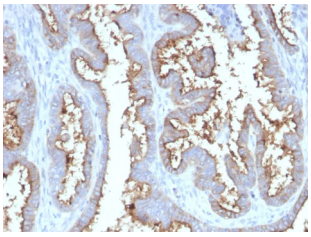
9 product images



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-CD73 antibody [NT5E/2545] (ab257311)

CD73 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using mouse Anti-CD73 antibody

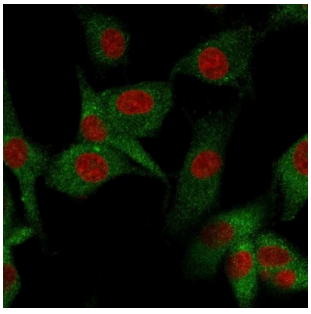
Formalin-fixed, paraffin-embedded human tonsil tissue stained for CD73 using ab257311 at 2 µg/ml in immunohistochemical analysis.



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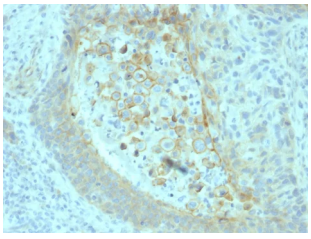
Formalin-fixed, paraffin-embedded human prostate tissue stained for CD73 using ab257311 at 2 µg/ml in immunohistochemical analysis.



Immunocytochemistry/ Immunofluorescence - Anti-CD73 antibody [NT5E/2545] (ab257311)

CD73 Immunocytochemistry/ Immunofluorescence staining using mouse Anti-CD73 antibody

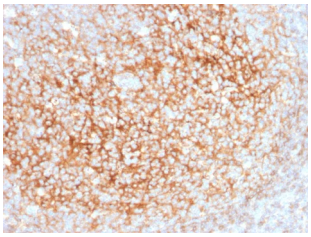
Immunofluorescence staining of U-87 MG (human glioblastoma-astrocytoma epithelial cell line) cells using ab257311 at 2µg/ml followed by a goat anti-Mouse IgG conjugated to CF488 (green). Membrane stained with Phalloidin (Red).



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-CD73 antibody [NT5E/2545] (ab257311)

CD73 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using mouse Anti-CD73 antibody

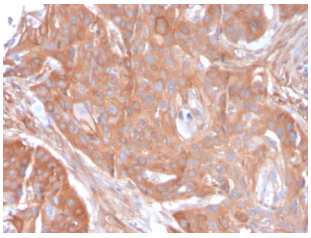
Formalin-fixed, paraffin-embedded human pancreatic carcinoma tissue stained for CD73 using ab257311 at 2 µg/ml in immunohistochemical analysis.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-CD73 antibody [NT5E/2545] (ab257311)

CD73 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using mouse Anti-CD73 antibody

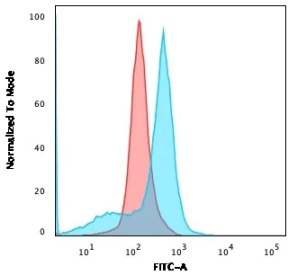
Formalin-fixed, paraffin-embedded human tonsil tissue stained for CD73 using ab257311 at 2 µg/ml in immunohistochemical analysis.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-CD73 antibody [NT5E/2545] (ab257311)

CD73 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using mouse Anti-CD73 antibody

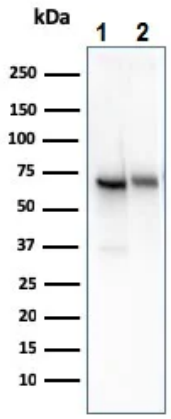
Formalin-fixed, paraffin-embedded human colon carcinoma tissue stained for CD73 using ab257311 at 2 µg/ml in immunohistochemical analysis.



Flow Cytometry - Anti-CD73 antibody [NT5E/2545] (ab257311)

CD73 Flow Cytometry staining using mouse Anti-CD73 antibody

Flow cytometric analysis of U-87 MG (human glioblastoma-astrocytoma epithelial cell line) cells labeling CD73 with ab257311 at 2 µg/ml followed by a goat anti-Mouse IgG-CF488 (Blue); Isotype Control (Red).



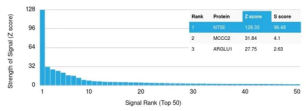
Western blot - Anti-CD73 antibody [NT5E/2545] (ab257311)

All lanes:
Western blot - Anti-CD73 antibody [NT5E/2545] (ab257311) at 2 µg/mL

Lane 1:
A431 (human epidermoid carcinoma cell line) whole cell lysate

Lane 2:
PC-3 (human prostate adenocarcinoma cell line) whole cell lysate

Predicted band size: 63 kDa



Protein Array - Anti-CD73 antibody [NT5E/2545] (ab257311)

Analysis of Protein Array containing more than 19,000 full-length human proteins using ab257311.
Z- and S- Score: The Z-score represents the strength of a signal that a monoclonal antibody (MAb) (in combination with a fluorescently-tagged anti-IgG secondary antibody) produces when binding to a particular protein on the HuProtTM array. Z-scores are described in units of standard deviations (SD's) above the mean value of all signals generated on that array. If targets on HuProtTM are arranged in descending order of the Z-score, the S-score is the difference (also in units of SD's) between the Z-score. S-score therefore represents the relative target specificity of a MAb to its intended target. A MAb is considered to specific to its intended target, if the MAb has an S-score of at least 2.5. For example, if a MAb binds to protein X with a Z-score of 43 and to protein Y with a Z-score of 14, then the S-score for the binding of that MAb to protein X is equal to 29.

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