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CD73 (NT5E) Antibody (C-term)

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP2014b

Product Information

Application	WB, IHC-P, E
Primary Accession	P21589
Other Accession	NP_002517
Reactivity	Human, Rat, Mouse
Predicted	Bovine, Canine, Rabbit, Chicken
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Calculated MW	63368
Antigen Region	520-550

Additional Information

Gene ID	4907
Other Names	5'-nucleotidase, 5'-NT, Ecto-5'-nucleotidase, CD73, NT5E, NT5, NTE
Target/Specificity	This CD73 (NT5E) antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 520-550 amino acids from the C-terminal region of human CD73 (NT5E).
Dilution	WB~~1:1000 IHC-P~~1:100~500 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is prepared by Saturated Ammonium Sulfate (SAS) precipitation followed by dialysis against PBS.
Storage	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	CD73 (NT5E) Antibody (C-term) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	NT5E
Synonyms	NT5, NTE
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).

Cellular Location Cell membrane; Lipid-anchor, GPI-anchor

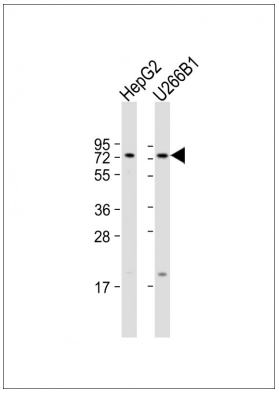
Background

Ecto-5-prime-nucleotidase (5-prime-ribonucleotide phosphohydrolase) catalyzes the conversion at neutral pH of purine 5-prime mononucleotides to nucleosides, the preferred substrate being AMP. The enzyme consists of a dimer of 2 identical 70 kD subunits bound externally to the plasma membrane by a glycosyl phosphatidyl inositol linkage. The enzyme is used as a marker of lymphocyte differentiation. Consequently, a deficiency of NT5E occurs in a variety of immunodeficiency diseases. Other forms of 5-prime nucleotidase exist in the cytoplasm and lysosomes and can be distinguished from ecto-NT5 by their substrate affinities, requirement for divalent magnesium ion, activation by ATP, and inhibition by inorganic phosphate. It is not known whether the different enzymes are coded by different genes or result from different posttranslational modifications of a single coding sequence.

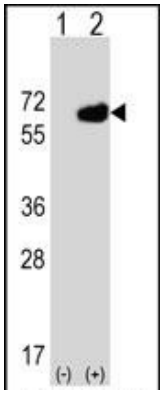
References

Hashikawa, T., et al., J. Dent. Res. 82(11):888-892 (2003). Rosi, F., et al., Biomed. Pharmacother. 56(2):100-104 (2002). Misumi, Y., et al., Eur. J. Biochem. 191(3):563-569 (1990). Boyle, J.M., et al., Hum. Genet. 81(1):88-92 (1988). Kalsi, K., et al., Mol. Cell. Biochem. 232 (1-2), 113-119 (2002).

Images

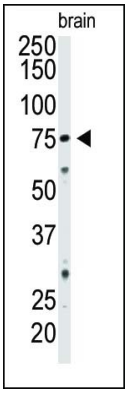


All lanes : Anti-NT5E Antibody (M535) at 1:1000 dilution Lane 1: HepG2 whole cell lysate Lane 2: U266B1 whole cell lysate Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/10000 dilution. Predicted band size : 63 kDa Blocking/Dilution buffer: 5% NFDM/TBST.

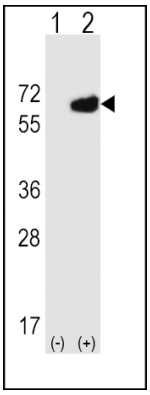


Western blot analysis of lysates from U266B1,HepG2 cell line,mouse brain tissue lysate(from left to right), using NT5E-M535 Antibody(Cat. #AP2014b). AP2014b was diluted at 1:2000 at each lane. A goat anti-rabbit IgG H&L(HRP) at 1:10000 dilution was used as the secondary antibody.Lysates at 20ug per lane.

Western blot analysis of CD73 Pab (Cat. #AP2014b) in



mouse brain tissue lysate. CD73 (Arrow) was detected using purified Pab. Secondary HRP-anti-rabbit was used for signal visualization with chemiluminescence.



Western blot analysis of NT5E (arrow) using rabbit polyclonal NT5E Antibody (M535) (Cat. #AP2014b). 293 cell lysates (2 ug/lane) either nontransfected (Lane 1) or transiently transfected (Lane 2) with the NT5E gene.



Formalin-fixed and paraffin-embedded human Placenta tissue reacted with CD73 (NT5E) Antibody (C-term)(Cat.#AP2014b), which was peroxidase-conjugated to the secondary antibody, followed by AEC staining. This data demonstrates the use of this antibody for immunohistochemistry; clinical relevance has not been evaluated.

Citations

- Hypoxia-inducible factor-1 □±-dependent protection from intestinal ischemia/reperfusion injury involves ecto-5'-nucleotidase (CD73) and the A2B adenosine receptor.
- Metastasis-related plasma membrane proteins of human breast cancer cells identified by comparative quantitative mass spectrometry.
- Role of extracellular nucleotide phosphohydrolysis in intestinal ischemia-reperfusion injury.
- A simplified method for the preparation of detergent-free lipid rafts.
- Potential prognostic biomarker CD73 regulates epidermal growth factor receptor expression in human breast cancer.
- RNAi-mediated CD73 suppression induces apoptosis and cell-cycle arrest in human breast cancer cells.
- Myo5b knockout mice as a model of microvillus inclusion disease.
- Extracellular 5'-nucleotidase (CD73) promotes human breast cancer cells growth through AKT/GSK-3β/β-catenin/cyclinD1 signaling pathway.
- Conjunctiva derived mesenchymal stem cell (CJMSCs) as a potential platform for differentiation into corneal epithelial cells on bioengineered electrospun scaffolds.
- Protective role of hypoxia-inducible factor-1α-dependent CD39 and CD73 in fulminant acute liver failure.

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