Website: thermofisher.com
Customer Service (US): 1 800 955 6288 ext. 1
Technical Support (US): 1 800 955 6288 ext. 441
thermofisher.com/contactus

Performance guaranteed

CD73 Monoclonal Antibody (7G2)

Catalog Number 41-0200

Product data sheet

Details	
Size	100 µg
Host/Isotope	Mouse / IgG2a, kappa
Class	Monoclonal
Type	Antibody
Clone	7G2
Immunogen	Highly purified human placental CD73 protein
Conjugate	Unconjugated
Form	Liquid
Concentration	0.5 mg/mL
Purification	Affinity chromatography
Storage buffer	PBS, pH 7.4
Contains	0.1% sodium azide
Storage Conditions	-20°C

Species Reactivity	
Species reactivity	Human
Published species	Human, Not Applicable

Tested Applications	Dilution *
Flow Cytometry (Flow)	Assay-dependent
Functional Assay (FN)	Assay-dependent
Inhibition Assays (IA)	Assay-dependent
Immunohistochemistry (Frozen) (IHC (F))	Assay-dependent
Immunoprecipitation (IP)	Assay-dependent
Western Blot (WB)	1 µg/mL
Immunocytochemistry (ICC/IF)	1:100

Published Applications	
Flow Cytometry (Flow)	See 4 publications below
Immunocytochemistry (ICC/IF)	See 2 publications below
ELISA (ELISA)	See 1 publications below
Immunohistochemistry (IHC)	See 1 publications below
Immunoprecipitation (IP)	See 1 publications below

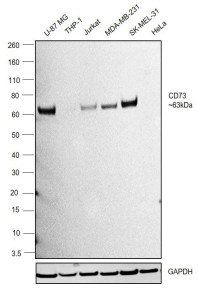
* Suggested working dilutions are given as a guide only. It is recommended that the user titrate the product for use in their own experiment using appropriate negative and positive controls.

Background/Target Information

CD73 (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. CD73 consists of a dimer of 2 identical 70 kDa subunits bound externally to the plasma membrane by a glycosyl phosphatidyl inositol linkage. CD73 is used as a marker of lymphocyte differentiation. Consequently, a deficiency of CD73 occurs in a variety of immunodeficiency diseases. Other forms of 5-prime nucleotidase exist in the cytoplasm and lysosomes and can be distinguished from CD73 by their substrate affinities, requirement for divalent magnesium ion, activation by ATP, and inhibition by inorganic phosphate. The CD73 gene has been localized to 6q14-q21 by immunofluorescence and a study of a panel of human x mouse hybrids that contained fragments of chromosome 6 as translocations. Defects in the CD73 gene can lead to the calcification of joints and arteries, and intestinal tuberculosis. Two transcript variants encoding different isoforms of CD73 have been found.

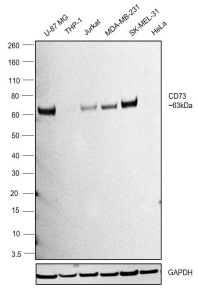
For Research Use Only. Not for use in diagnostic procedures. Not for resale without express authorization.

Product Images For CD73 Monoclonal Antibody (7G2)



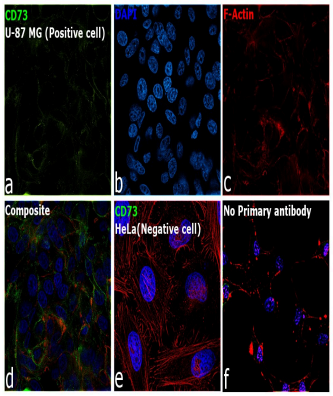
CD73 Antibody (41-0200) in WB

Western blot was performed using Anti-CD73 Monoclonal Antibody (7G2) (Product # 41-0200) and a 63 kDa band corresponding to CD73 was observed across the cell lines tested except THP-1 and HeLa. Whole cell extracts (30 µg lysate) of U-87 MG (Lane 1), THP-1 (Lane 2), Jurkat (Lane 3), MDA-MB-231 (Lane 4), SK-MEL-31 (Lane 5) and HeLa (Lane 6) were electrophoresed using NuPAGE™ 4-12% Bis-Tris Protein Gel (Product # NP0321BOX). Resolved proteins were then transferred onto a Nitrocellulose membrane (Product # LC2002) by iBlot® 2 Dry Blotting System (Product # IB21001). The blot was probed with the primary antibody at a concentration of 1 µg/mL and detected by chemiluminescence with Goat anti-Mouse IgG (H+L) Superclonal™ Recombinant Secondary Antibody, HRP (Product # A28177, 1:4000 dilution) using the iBright FL 1000 (Product # A32752). Chemiluminescent detection was performed using Novex® ECL Chemiluminescent Substrate Reagent Kit (Product # WP20005).



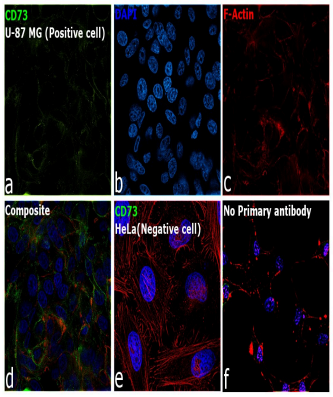
CD73 Antibody (41-0200)

Antibody specificity was demonstrated by detection of differential basal expression of the target across the cell lines owing to their inherent genetic constitution. Relative expression of CD73 was observed in U-87 MG, Jurkat, MDA-MB-231 and SK-MEL-31 cell lines in comparison to THP-1 and HeLa using Anti-CD73 Monoclonal Antibody (7G2) (Product # 41-0200) in Western Blot. {RE}



CD73 Antibody (41-0200)

Antibody specificity was demonstrated by detection of differential basal expression of the target across cell models owing to their inherent genetic constitution. Immunofluorescence analysis using Anti-CD73 Monoclonal Antibody (7G2) (Product # 41-0200), shows the expression in U-87 MG cells in comparison to HeLa cells. {RE}

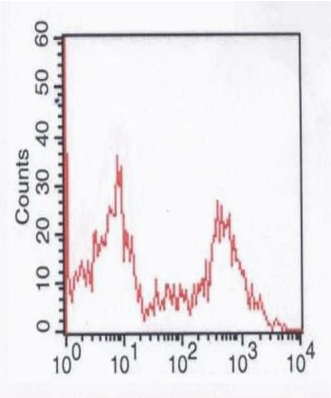


CD73 Antibody (41-0200) in ICC/IF

Immunofluorescence analysis of CD73 was performed using 70% confluent log phase U-87 MG cells. The cells were fixed with 4% paraformaldehyde for 15 minutes, permeabilized with 0.1% Triton™ X-100 for 10 minutes, and blocked with 2% BSA for 45 minutes at room temperature. The cells were labeled with CD73 Monoclonal Antibody (7G2) (Product # 41-0200) at a concentration of 1 µg/mL in 0.1% BSA, incubated at 4 degree celsius overnight and then labeled with Goat anti-Mouse IgG (H+L) Superclonal™ Recombinant Secondary Antibody, Alexa Fluor® 488 conjugate (Product # A28175), (1:2000 dilution), for 45 minutes at room temperature (Panel a: Green). Nuclei (Panel b: Blue) were stained with ProLong™ Diamond Antifade Mountant with DAPI (Product # P36962). F-actin (Panel c: Red) was stained with Rhodamine Phalloidin (Product # R415, 1:300 dilution). Panel d represents the merged image showing membrane localization. Panel e represents HeLa cells showing no expression of CD73. Panel f represents control cells with no primary antibody to assess background. The images were captured at 60X magnification.

Thermo Fisher Scientific
3747 N. Meridian Road
Rockford, IL 61105 USA

thermofisher.com/contactus



CD73 Antibody (41-0200) in Flow

Human peripheral blood lymphocytes stained with Mouse anti-CD73 monoclonal antibody (Product # 41-0200).

Thermo Fisher Scientific
3747 N. Meridian Road
Rockford, IL 61105 USA

thermofisher.com/contactus

PubMed References For CD73 Monoclonal Antibody (7G2)

4 Flow Cytometry References

Species / Dilution	Summary
Human / Not Cited	41-0200 was used in Flow cytometry/Cell sorting to explore the role of extracellular vesicles from adipose tissue mesenchymal stem/stromal cells in promoting wound healing, and the proliferation and migration of keratinocytes and fibroblasts. Stem cells international (2020; 2017:) **"Extracellular Vesicles from Adipose-Derived Mesenchymal Stem/Stromal Cells Accelerate Migration and Activate AKT Pathway in Human Keratinocytes and Fibroblasts Independently of miR-205 Activity."** Author(s):Ferreira ADF,Cunha PDS,Carregal VM,da Silva PC,de Miranda MC,Kunrath-Lima M,de Melo MIA,Faraco CCF, Barbosa JL,Frezard F,Resende V,Rodrigues MA,de Goes AM,Gomes DA PubMed Article URL:http://dx.doi.org/10.1155/2017/9841035
Human / Not Cited	Tissue antigens (1990; 35: 9) **"Production and characterization of monoclonal antibodies to the glycosyl phosphatidylinositol-anchored lymphocyte differentiation antigen ecto-5'-nucleotidase (CD73)."** Author(s):Thomson LF,Ruedi JM,Glass A,Moldenhauer G,Moller P,Low MG,Klemens MR,Massaia M,Lucas AH PubMed Article URL:http://dx.doi.org/10.1111/j.1399-0039.1990.tb01750.x
Human / Not Cited	41-0200 was used in Flow Cytometry to examine the modulation of endothelial barrier function in dengue virus type 2 infections using primary human umbilical vein endothelial cells. The American journal of tropical medicine and hygiene (2013; 88: 89) **"Dengue virus type 2 modulates endothelial barrier function through CD73."** Author(s):Patkar C,Giaya K,Libraty DH PubMed Article URL:http://dx.doi.org/10.4269/ajtmh.2012.12-0474
Human / Not Cited	41-0200 was used in Flow cytometry/Cell sorting to determine the therapeutic effect of Wharton's jelly mesenchymal stem cells on mitochondiral dysfunction in MELAS patients. Oxidative medicine and cellular longevity (2019; 2019:) **"Mitochondrial Transfer of Wharton's Jelly Mesenchymal Stem Cells Eliminates Mutation Burden and Rescues Mitochondrial Bioenergetics in Rotenone-Stressed MELAS Fibroblasts."** Author(s):Lin TK,Chen SD,Chuang YC,Lan MY,Chuang JH,Wang PW,Hsu TY,Wang FS,Tsai MH,Huang ST,Wang XW, Tsai PC,Lin HY,Liou CW PubMed Article URL:http://dx.doi.org/10.1155/2019/9537504

2 Immunocytochemistry References

Species / Dilution	Summary
Human / 1:5	41-0200 was used in Immunocytochemistry to show that regulators of G protein signalling proteins may play multifaceted supportive or conflicting roles during human adipogenesis and osteogenesis. Biological research (2017; 50:) **"Expression regulation and functional analysis of RGS2 and RGS4 in adipogenic and osteogenic differentiation of human mesenchymal stem cells."** Author(s):Madrigal A,Tan L,Zhao Y PubMed Article URL:http://dx.doi.org/10.1186/s40659-017-0148-1
Human / 1:100	410200 was used in immunocytochemistry to describe the types, structure, components, dynamics and functionality of the tunneling nanotubes bridging neighboring human umbilical cord mesenchymal stem cells obtained from Wharton's jelly Stem cell reviews and reports (2017; 13: 491) **"Characterization of Tunneling Nanotubes in Wharton's jelly Mesenchymal Stem Cells. An Intercellular Exchange of Components between Neighboring Cells."** Author(s):Sanchez V,Villalba N,Fiore L,Luzzani C,Miriuka S,Boveris A,Gelpi RJ,Brusco A,Poderoso JJ PubMed Article URL:http://dx.doi.org/10.1007/s12015-017-9730-8

1 ELISA References

Species / Dilution	Summary
Human / 1 µg/ml	410200 was used in ELISA to find prognostic and predictive biomarkers for patients with colorectal cancer treated with cetuximab Cancer medicine (2016; 5: 2249) **"Blood-based markers of efficacy and resistance to cetuximab treatment in metastatic colorectal cancer: results from CALGB 80203 (Alliance)."** Author(s):Hatch AJ,Sibley AB,Starr MD,Brady JC,Jiang C,Jia J,Bowers DL,Pang H,Owzar K,Niedzwiecki D,Innocenti F, Venook AP,Hurwitz HI,Nixon AB PubMed Article URL:http://dx.doi.org/10.1002/cam4.806

1 Immunohistochemistry References

Species / Dilution	Summary

Thermo Fisher Scientific
3747 N. Meridian Road
Rockford, IL 61105 USA

thermofisher.com/contactus

Human / Not Cited	Tissue antigens (1990; 35: 9) **"Production and characterization of monoclonal antibodies to the glycosyl phosphatidylinositol-anchored lymphocyte differentiation antigen ecto-5'-nucleotidase (CD73)."** Author(s):Thomson LF,Ruedi JM,Glass A,Moldenhauer G,Moller P,Low MG,Klemens MR,Massaia M,Lucas AH PubMed Article URL:http://dx.doi.org/10.1111/j.1399-0039.1990.tb01750.x

1 Immunoprecipitation References

Species / Dilution	Summary
Human / Not Cited	Tissue antigens (1990; 35: 9) **"Production and characterization of monoclonal antibodies to the glycosyl phosphatidylinositol-anchored lymphocyte differentiation antigen ecto-5'-nucleotidase (CD73)."** Author(s):Thomson LF,Ruedi JM,Glass A,Moldenhauer G,Moller P,Low MG,Klemens MR,Massaia M,Lucas AH PubMed Article URL:http://dx.doi.org/10.1111/j.1399-0039.1990.tb01750.x

Thermo Fisher Scientific
3747 N. Meridian Road
Rockford, IL 61105 USA

thermofisher.com/contactus