SANTA CRUZ BIOTECHNOLOGY, INC.

CD73 (D-12): sc-398260

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

CD73 (also designated ecto-5'-nucleotidase, E5NT, NT, NT5, NTE, eN and eNT) is a glycosylphosphatidylinositol (GPI)-anchored adhesion protein that catalyzes the dephosphorylation of extracellular purine and pyrimidine nucleotides to their corresponding bioactive nucleosides. CD73 is a dimer of two identical subunits that depends on GPI to link with the external face of the plasma membrane. Similar to other GPI-anchored proteins, CD73 mediates co-stimulatory signals in T cell activation. CD73 has few structural variants, yet elicits diverse biological function through differential regulation in endothelial cells (EC), subpopulations of B and T cells, germinal center follicular dendritic cells and on thymic medullary reticular fibroblasts. For example, IgG mediated neutralization of CD73 interferes with lymphocyte adhesion to EC, and blocks aggregation of germinal center B cells and follicular dendritic cells. Furthermore, IgG-mediated targeting of lymphocyte CD73, but not of endothelial cell CD73, causes shedding of CD73 and tyrosine phosphorylation of proteins.

CHROMOSOMAL LOCATION

Genetic locus: NT5E (human) mapping to 6q14.3.

SOURCE

CD73 (D-12) is a mouse monoclonal antibody raised against amino acids 275-574 of CD73 of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

CD73 (D-12) is available conjugated to agarose (sc-398260 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-398260 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-398260 PE), fluorescein (sc-398260 FITC), Alexa Fluor® 488 (sc-398260 AF488), Alexa Fluor® 546 (sc-398260 AF546), Alexa Fluor® 594 (sc-398260 AF594) or Alexa Fluor® 647 (sc-398260 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-398260 AF680) or Alexa Fluor® 790 (sc-398260 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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APPLICATIONS

CD73 (D-12) is recommended for detection of CD73 of human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for CD73 siRNA (h): sc-42862, CD73 shRNA Plasmid (h): sc-42862-SH and CD73 shRNA (h) Lentiviral Particles: sc-42862-V.

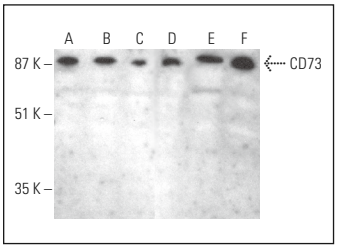
Molecular Weight of CD73: 71 kDa.

Positive Controls: CD73 (h2): 293T Lysate: sc-117055, Y79 cell lysate: sc-2240 or JEG-3 whole cell lysate: sc-364255.

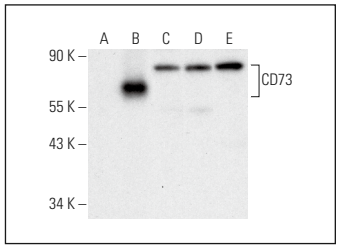
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



CD73 (D-12) HRP: sc-398260 HRP. Direct western blot analysis of CD73 expression in NCI-H1299 (**A**), NTERA-2 cl.D1 (**B**), Y79 (**C**), K-562 (**D**), Hep G2 (**E**) and Jurkat (**F**) whole cell lysates.



CD73 (D-12): sc-398260. Western blot analysis of CD73 expression in non-transfected 293T: sc-117752 (**A**), human CD73 transfected 293T: sc-117055 (**B**), K-562 (**C**), JEG-3 (**D**) and Y79 (**E**) whole cell lysates.

SELECT PRODUCT CITATIONS

1. Boucher, J.M., et al. 2018. Rab 27a regulates human perivascular adipose progenitor cell differentiation. Cardiovasc. Drugs Ther. 32: 519-530.
2. Ayaz-Guner, S., et al. 2020. A comparative study on normal and obese mice indicates that the secretome of mesenchymal stromal cells is influenced by tissue environment and physiopathological conditions. Cell Commun. Signal. 18: 118.
3. Ghufran, H., et al. 2022. Tumoricidal effects of unprimed and curcumin-primed adipose-derived stem cells on human hepatoma Hep G2 cells under oxidative conditions. Tissue Cell 79: 101968.
4. Shifa Ul Haq, H.M., et al. 2023. Priming with caffeic acid enhances the potential and survival ability of human adipose-derived stem cells to counteract hypoxia. Regen. Ther. 22: 115-127.

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.