

CD73 (2B6): sc-130006

BACKGROUND

CD73 (also designated ecto-5'-nucleotidase, E5NT, NT, NT5, NTE, eN and eNT) is a glycosyl-phosphatidylinositol (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.

REFERENCES

1. Yamashita, Y., et al. 1998. CD73 expression and Fyn-dependent signaling on murine lymphocytes. *Eur. J. Immunol.* 28: 2981-2990.
2. Kalsi, K., et al. 2002. Regulation of ecto-5'-nucleotidase by TNF α in human endothelial cells. *Mol. Cell. Biochem.* 232: 113-119.
3. Henttinen, T., et al. 2003. Adherent leukocytes prevent adenosine formation and impair endothelial barrier function by ecto-5'-nucleotidase/CD73-dependent mechanism. *J. Biol. Chem.* 278: 24888-24895.

CHROMOSOMAL LOCATION

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

SOURCE

CD73 (2B6) is a mouse monoclonal antibody raised against amino acids 27-252 of recombinant CD73 of human origin.

PRODUCT

Each vial contains 100 μ g IgG_{2b} in 1.0 ml PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

CD73 (2B6) is recommended for detection of CD73 of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)] 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.

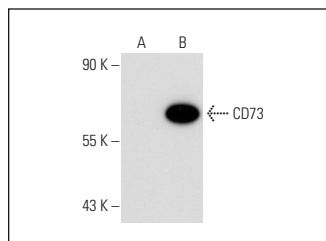
Molecular Weight of CD73 isoforms: 67-71 kDa.

Positive Controls: K-562 whole cell lysate: sc-2203, JEG-3 whole cell lysate: sc-364255 or CD73 (h2): 293T lysate: sc-117055.

STORAGE

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

DATA



CD73 (2B6): sc-130006. Western blot analysis of CD73 expression in non-transfected: sc-117752 (A) and human CD73 transfected: sc-117055 (B) 293T whole cell lysates.

SELECT PRODUCT CITATIONS

1. Grozio, A., et al. 2013. CD73 protein as a source of extracellular precursors for sustained NAD⁺ biosynthesis in FK866-treated tumor cells. *J. Biol. Chem.* 288: 25938-25949.
2. Koszałka, P., et al. 2014. Inhibition of CD73 stimulates the migration and invasion of B16F10 melanoma cells *in vitro*, but results in impaired angiogenesis and reduced melanoma growth *in vivo*. *Oncol. Rep.* 31: 819-827.
3. Oyarzún, C., et al. 2015. Increased levels of adenosine and ecto 5'-nucleotidase (CD73) activity precede renal alterations in experimental diabetic rats. *Biochem. Biophys. Res. Commun.* 468: 354-359.
4. Koszałka, P., et al. 2015. CD73 on B16F10 melanoma cells in CD73-deficient mice promotes tumor growth, angiogenesis, neovascularization, macrophage infiltration and metastasis. *Int. J. Biochem. Cell Biol.* 69: 1-10.
5. Sociali, G., et al. 2016. Antitumor effect of combined NAMPT and CD73 inhibition in an ovarian cancer model. *Oncotarget* 7: 2968-2984.

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.

CONJUGATES

See **CD73 (D-12): sc-398260** for CD73 antibody conjugates, including AC, HRP, FITC, PE, and Alexa Fluor[®] 488, 546, 594, 647, 680 and 790.