SANTA CRUZ BIOTECHNOLOGY, INC.

CD73 (h2): 293T Lysate: sc-117055

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 TNFα 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.
4. Niemela, J., et al. 2004. IFN-α induced adenosine production on the endothelium: a mechanism mediated by CD73 (ecto-5'-nucleotidase) upregulation. J. Immunol. 172: 1646-1653.
5. Volmer, J.B., et al. 2006. Ecto-5'-nucleotidase (CD73)-mediated adenosine production is tissue protective in a model of bleomycin-induced lung injury. J. Immunol. 176: 4449-4458.
6. Kondo, T., et al. 2006. Expression of CD73 and its ecto-5'-nucleotidase activity are elevated in papillary thyroid carcinomas. Histopathology 48: 612-614.
7. Zernecke, A., et al. 2006. CD73/ecto-5'-nucleotidase protects against vascular inflammation and neointima formation. Circulation 113: 2120-2127.
8. Munoz-Fernandez, R., et al. 2006. Follicular dendritic cells are related to bone marrow stromal cell progenitors and to myofibroblasts. J. Immunol. 177: 280-289.

CHROMOSOMAL LOCATION

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

PRODUCT

CD73 (h2): 293T Lysate represents a lysate of human CD73 transfected 293T cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

APPLICATIONS

CD73 (h2): 293T Lysate is suitable as a Western Blotting positive control for human reactive CD73 antibodies. Recommended use: 10-20 µl per lane.

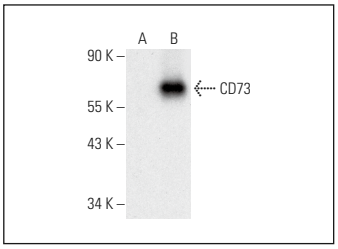
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

CD73 (D-12): sc-398260 is recommended as a positive control antibody for Western Blot analysis of enhanced human CD73 expression in CD73 transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

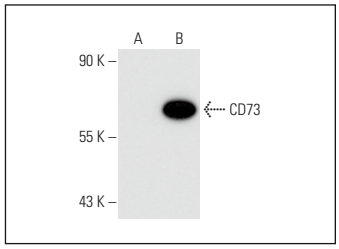
RECOMMENDED SUPPORT REAGENTS

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.

DATA



CD73 (D-12): sc-398260. Western blot analysis of CD73 expression in non-transfected: sc-117752 (**A**) and human CD73 transfected: sc-117055 (**B**) 293T whole cell lysates.



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.

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.