

# CD73 (IE9): sc-32299

## 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.

## CHROMOSOMAL LOCATION

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

## SOURCE

CD73 (IE9) is a mouse monoclonal antibody raised against CD73 purified from placenta of human origin.

## PRODUCT

Each vial contains 200 µg IgG<sub>3</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

## APPLICATIONS

CD73 (IE9) 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 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 immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500); non cross-reactive with mouse.

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: A-375 cell lysate: sc-3811, K-562 whole cell lysate: sc-2203 or Jurkat whole cell lysate: sc-2204.

## STORAGE

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

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) for detailed protocols and support products.

## RESEARCH USE

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

## SELECT PRODUCT CITATIONS

1. Tezcan, B., et al. 2010. Dose dependent effect of C-type natriuretic peptide signaling in glycosaminoglycan synthesis during TGF-β1 induced chondrogenic differentiation of mesenchymal stem cells. *J. Mol. Histol.* 41: 247-258.
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3. Zhi, X., et al. 2012. Potential prognostic biomarker CD73 regulates epidermal growth factor receptor expression in human breast cancer. *IUBMB Life* 64: 911-920.
4. Kocamaz, E., et al. 2012. Implication of C-type natriuretic peptide-3 signaling in glycosaminoglycan synthesis and chondrocyte hypertrophy during TGF-β1 induced chondrogenic differentiation of chicken bone marrow-derived mesenchymal stem cells. *J. Mol. Histol.* 43: 497-508.
5. Sarnowska, A., et al. 2013. Encapsulation of mesenchymal stem cells by bioscaffolds protects cell survival and attenuates neuroinflammatory reaction in injured brain tissue after transplantation. *Cell Transplant.* 22: S67-S82.
6. Rakocevic, J., et al. 2015. Co-expression of vascular and lymphatic endothelial cell markers on early endothelial cells present in aspirated coronary thrombi from patients with ST-elevation myocardial infarction. *Exp. Mol. Pathol.* 100: 31-38.
7. Shi, Z., et al. 2015. Comparison of flowcytometric and immunocytochemistry analysis of stem cell surface markers. *Online J. Biol. Sci.* 15: 1-5.
8. Wang, C., et al. 2015. Establishment of human pancreatic cancer gemcitabine-resistant cell line with ribonucleotide reductase overexpression. *Oncol. Rep.* 33: 383-390.
9. Takeuchi, T., et al. 2016. Oct4B, CD90, and CD73 are upregulated in bladder tissue following electro-resection of the bladder. *J. Stem Cells Regen. Med.* 12: 10-15.
10. Ren, Z.H., et al. 2016. CD73 as a novel marker for poor prognosis of oral squamous cell carcinoma. *Oncol. Lett.* 12: 556-562.
11. Fujita, N., et al. 2016. Chordoma-derived cell line U-CH1-N recapitulates the biological properties of notochordal nucleus pulposus cells. *J. Orthop. Res.* 34: 1341-1350.

## CONJUGATES

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