SANTA CRUZ BIOTECHNOLOGY, INC.

CD24 (2Q1282): sc-70598

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

CD24 is a GPI-linked membrane sialoglycoprotein that is expressed on pro-B, pre-B and mature B cells, and its expression is decreased after B cell activation. CD24 is also found on granulocytes and a small fraction of thymocytes and neuroblastomas, but not on plasma cells. CD24 may play a role in the regulation of B cell proliferation and differentiation. CD24 is expressed in hematological malignancies as well as in a large variety of solid tumors. A shift from apical localization to cytoplasmic staining of CD24 is a surrogate marker of stromal invasion in ovarian serous tumors of borderline malignancy. CD24 protein can be a B cell differentiation marker that is expressed on mature resting B cells and disappears upon stimulation.

REFERENCES

1. Kemshead, J.T., et al. 1982. Monoclonal antibodies defining markers with apparent selectivity for particular haemopoietic cell types may also detect antigens on cells of neural crest origin. Hybridoma 1: 109-123.
2. Hsu, S.M., et al. 1984. Phenotypic expression of B lymphocytes. Identification with monoclonal antibodies in normal lymphoid tissues. Am. J. Pathol. 114: 387-395.
3. Fischer, G.F., et al. 1990. Signal transduction in lymphocytic and myeloid cells via CD24, a new member of phosphoinositol-anchored membrane molecules. J. Immunol. 144: 638-641.

CHROMOSOMAL LOCATION

Genetic locus: CD24 (human) mapping to 6p25.3; Cd24a (mouse) mapping to 10 B2.

SOURCE

CD24 (2Q1282) is a mouse monoclonal antibody raised against NALM-1 human pre-B leukemia cell line.

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.

APPLICATIONS

CD24 (2Q1282) is recommended for detection of CD24 of mouse, rat and 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 flow cytometry (1 µg per 1 x 10^6 cells).

Suitable for use as control antibody for CD24 siRNA (h): sc-29978, CD24 siRNA (m): sc-29979, CD24 shRNA Plasmid (h): sc-29978-SH, CD24 shRNA Plasmid (m): sc-29979-SH, CD24 shRNA (h) Lentiviral Particles: sc-29978-V and CD24 shRNA (m) Lentiviral Particles: sc-29979-V.

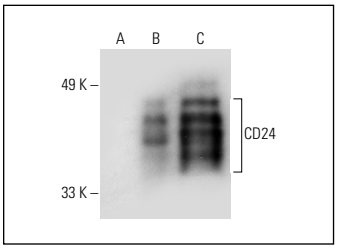
Molecular Weight of CD24: 35-45 kDa.

Positive Controls: CD24 (h): 293T Lysate: sc-116926, HeLa whole cell lysate: sc-2200 or A549 cell lysate: sc-2413.

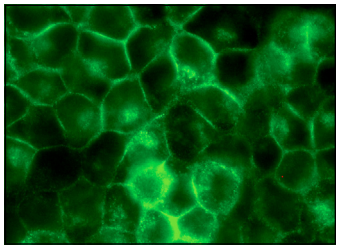
RECOMMENDED SUPPORT REAGENTS

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



CD24 (2Q1282): sc-70598. Western blot analysis of CD24 expression in non-transfected 293T: sc-117752 (**A**), human CD24 transfected 293T: sc-116926 (**B**) and human PBL (**C**) whole cell lysates.



CD24 (2Q1282): sc-70598. Immunofluorescence staining of methanol-fixed HeLa cells showing membrane localization.

SELECT PRODUCT CITATIONS

1. Vazquez-Martin, A., et al. 2010. Metformin regulates breast cancer stem cell ontogeny by transcriptional regulation of the epithelial-mesenchymal transition (EMT) status. Cell Cycle 9: 3807-3814.
2. Vazquez-Martin, A., et al. 2011. The anti-diabetic drug metformin suppresses the metastasis-associated protein CD24 in MDA-MB-468 triple-negative breast cancer cells. Oncol. Rep. 25: 135-140.
3. Tin, A.S., et al. 2014. Essential role of the cancer stem/progenitor cell marker nucleostemin for indole-3-carbinol anti-proliferative responsiveness in human breast cancer cells. BMC Biol. 12: 72.
4. Patil, S., et al. 2019. Culture and characterization of human dental pulp-derived stem cells as limbal stem cells for corneal damage repair. Mol. Med. Rep. 20: 4688-4694.

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.

CONJUGATES

See **CD24 (SN3): sc-19585** for CD24 antibody conjugates, including AC, HRP, FITC, PE, and Alexa Fluor® 488, 546, 594, 647, 680 and 790.