

# CD24 (2Q1282): sc-70598

## 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. 1. 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<sub>1</sub> 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<sup>6</sup> 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.

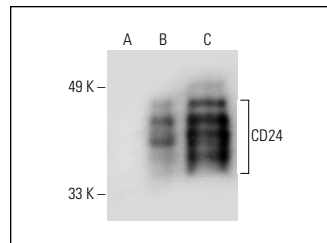
Molecular Weight of CD24: 35-45 kDa.

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

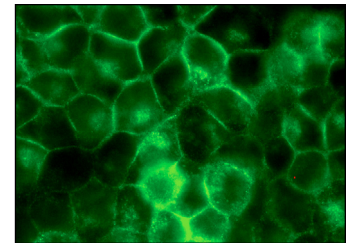
## RECOMMENDED SUPPORT REAGENTS

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.



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