

CD24 (HIS50): sc-33669

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.
4. Kay, R., et al. 1991. CD24, a signal transducer modulating B cell activation responses, is a very short peptide with a glycosyl-phosphatidylinositol membrane anchor. *J. Immunol.* 147: 1412-1416.
5. Jackson, D., et al. 1992. CD24, a signal-transducing molecule expressed on human B cells, is a major surface antigen on small cell lung carcinomas. *Cancer Res.* 52: 5264-5270.
6. Hubbe, M., et al. 1994. Heat-stable antigen/CD24 on mouse T lymphocytes: evidence for a costimulatory function. *Eur. J. Immunol.* 24: 731-737.
7. Williams, L.A., et al. 1996. Identification of a novel dendritic cell surface antigen defined by carbohydrate specific CD24 antibody cross-reactivity. *Immunology* 89: 120-125.
8. Fogel, M., et al. 1999. CD24 is a marker for human breast carcinoma. *Cancer Lett.* 143: 87-94.

CHROMOSOMAL LOCATION

Genetic locus: Cd24a (mouse) mapping to 10 B2.

SOURCE

CD24 (HIS50) is a mouse monoclonal antibody raised against bone marrow cells of rat origin.

PRODUCT

Each vial contains 200 µg IgM in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

CD24 (HIS50) is available conjugated to either phycoerythrin (sc-33669 PE) or fluorescein (sc-33669 FITC), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM.

APPLICATIONS

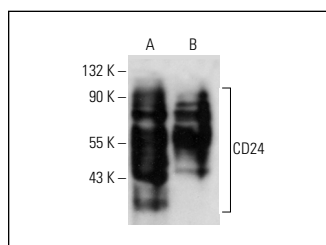
CD24 (HIS50) is recommended for detection of CD24 of mouse and rat origin by Western Blotting (starting dilution 1:100, dilution range), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and flow cytometry (1 µg per 1 x 10⁶ cells); may cross-react with intracellular antigens in human PBMC.

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

Molecular Weight of CD24: 35-45 kDa.

Positive Controls: rat spleen extract: sc-2397 or rat PBL whole cell lysate.

DATA



CD24 (HIS50): sc-33669. Western blot analysis of CD24 expression in rat spleen tissue extract (A) and rat PBL whole cell lysate (B). Note presence of differentially glycosylated forms of CD24.

SELECT PRODUCT CITATIONS

1. Smith, N.C., et al. 2015. Dynamic upregulation of CD24 in pre-adipocytes promotes adipogenesis. *Adipocyte* 4: 89-100.
2. Steines, L., et al. 2020. Anti-BAFF treatment interferes with humoral responses in a model of renal transplantation in rats. *Transplantation* 104: e16-e22.
3. Tavanasefat, H., et al. 2020. Molecular consequences of fetal alcohol exposure on amniotic exosomal miRNAs with functional implications for stem cell potency and differentiation. *PLoS ONE* 15: e0242276.

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 (M1/69): sc-19651** for CD24 antibody conjugates, including AC, HRP, FITC, PE, and Alexa Fluor[®] 488, 546, 594, 647, 680 and 790.