SANTA CRUZ BIOTECHNOLOGY, INC.

CD24 (M1/69): sc-19651

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.

CHROMOSOMAL LOCATION

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

SOURCE

CD24 (M1/69) is a rat monoclonal antibody raised against C57BL/10 mouse splenic T cells and concanavalin A-activated splenocytes.

PRODUCT

Each vial contains 200 µg IgG_{2b} in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

CD24 (M1/69) is available conjugated to agarose (sc-19651 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-19651 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-19651 PE), fluorescein (sc-19651 FITC), Alexa Fluor® 488 (sc-19651 AF488), Alexa Fluor® 546 (sc-19651 AF546), Alexa Fluor® 594 (sc-19651 AF594) or Alexa Fluor® 647 (sc-19651 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-19651 AF680) or Alexa Fluor® 790 (sc-19651 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

CD24 (M1/69) is recommended for detection of CD24 of mouse 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), immunohistochemistry (including paraffin-embedded sections) (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 (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: M1 whole cell lysate: sc-364782, mouse spleen extract: sc-2391 or CTLL-2 cell lysate: sc-2242.

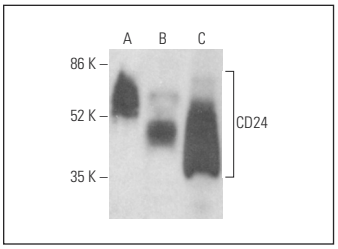
RESEARCH USE

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

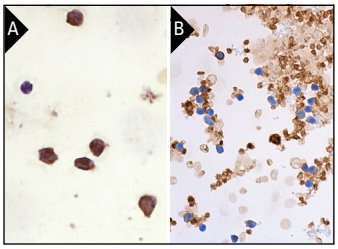
STORAGE

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

DATA



CD24 (M1/69): sc-19651. Western blot analysis of CD24 expression in M1 (**A**) and CTLL-2 (**B**) whole cell lysates and mouse spleen tissue extract (**C**).



CD24 (M1/69): sc-19651. Immunoperoxidase staining of formalin-fixed, paraffin-embedded mouse peripheral blood lymphocytes showing membrane staining (**A**). Immunoperoxidase staining of formalin fixed, paraffin-embedded mouse blood smear showing membrane staining of erythrocytes (**B**).

SELECT PRODUCT CITATIONS

1. Nakano, I., et al. 2007. Phosphoserine phosphatase is expressed in the neural stem cell niche and regulates neural stem and progenitor cell proliferation. Stem Cells 25: 1975-1984.
2. Piechocki, M.P. 2008. A stable explant culture of HER2/Neu invasive carcinoma supported by α-smooth muscle Actin expressing stromal cells to evaluate therapeutic agents. BMC Cancer 8: 119.
3. Magalhães, G.M., et al. 2013. Immunodetection of cells with a $CD44^+$/$CD24^-$ phenotype in canine mammary neoplasms. BMC Vet. Res. 9: 205.
4. Hirokawa, Y., et al. 2014. Colonic myofibroblast cell line stimulates colonoid formation. Am. J. Physiol. Gastrointest. Liver Physiol. 306: G547-G556.
5. Stott, S.R., et al. 2017. CD24 expression does not affect dopamine neuronal survival in a mouse model of Parkinson's disease. PLoS ONE 12: e0171748.
6. Li, D., et al. 2018. CD24-p53 axis suppresses diethylnitrosamine-induced hepatocellular carcinogenesis by sustaining intrahepatic macrophages. Cell Discov. 4: 6.
7. Li, W., et al. 2019. A homeostatic Arid1a-dependent permissive chromatin state licenses hepatocyte responsiveness to liver-injury-associated YAP signaling. Cell Stem Cell 25: 54-68.e5.
8. Hembram, K.C., et al. 2020. Quinacrine based gold hybrid nanoparticle caused apoptosis through modulating replication fork in oral cancer stem cells. Mol. Pharm. 17: 2463-2472.
9. Kothari, C., et al. 2021. TBC1D9: an important modulator of tumorigenesis in breast cancer. Cancers 13: 3557.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.