SANTA CRUZ BIOTECHNOLOGY, INC.

CD34 (MEC 14.7): sc-18917

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

CD34 is a heavily glycosylated, transmembrane glycoprotein that is expressed on the surface of lymphohematopoietic stem and progenitor cells, small-vessel endothelial cells, embryonic fibroblasts and some cells in fetal and adult nervous tissue. CD34 antigen expression is highest in the most primitive stem cells and is gradually lost as lineage committed progenitors differentiate. The CD34 antigen is also present on capillary endothelial cells and on bone marrow stromal cells. The CD34 cytoplasmic domain has an intracellular domain that contains consensus sites for activated protein kinase C (PKC) phosphorylation as well as serine, threonine and tyrosine phosphorylation consensus sites.

CHROMOSOMAL LOCATION

Genetic locus: CD34 (human) mapping to 1q32.2; Cd34 (mouse) mapping to 1 H6.

SOURCE

CD34 (MEC 14.7) is a rat monoclonal antibody raised against 129/Sv mouse derived endothelioma cell line tEnd.1.

PRODUCT

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

CD34 (MEC 14.7) is available conjugated to agarose (sc-18917 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-18917 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-18917 PE), fluorescein (sc-18917 FITC), Alexa Fluor® 488 (sc-18917 AF488), Alexa Fluor® 546 (sc-18917 AF546), Alexa Fluor® 594 (sc-18917 AF594) or Alexa Fluor® 647 (sc-18917 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-18917 AF680) or Alexa Fluor® 790 (sc-18917 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

CD34 (MEC 14.7) is recommended for detection of CD34 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 CD34 siRNA (h): sc-29249, CD34 siRNA (m): sc-29993, CD34 shRNA Plasmid (h): sc-29249-SH, CD34 shRNA Plasmid (m): sc-29993-SH, CD34 shRNA (h) Lentiviral Particles: sc-29249-V and CD34 shRNA (m) Lentiviral Particles: sc-29993-V.

Molecular Weight of glycosylated CD34: 90-120 kDa.

Positive Controls: NIH/3T3 whole cell lysate: sc-2210.

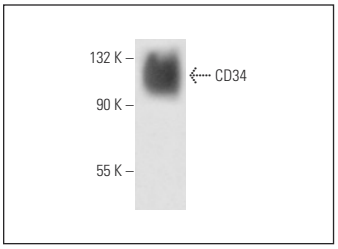
STORAGE

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

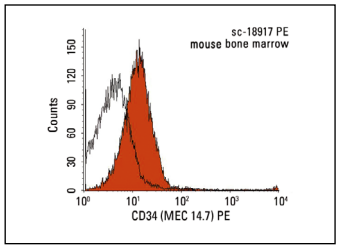
RESEARCH USE

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

DATA



CD34 (MEC 14.7): sc-18917. Western blot analysis of CD34 expression in NIH/3T3 whole cell lysate.



CD34 (MEC 14.7) PE: sc-18917 PE. FCM analysis of mouse bone marrow cells. Black line histogram represents the isotype control, normal rat IgG_{2a}-PE: sc-2872.

SELECT PRODUCT CITATIONS

1. Cousin, B., et al. 2003. Reconstitution of lethally irradiated mice by cells isolated from adipose tissue. Biochem. Biophys. Res. Commun. 301: 1016-1022.
2. Yin, C., et al. 2014. TLR7-expressing cells comprise an interfollicular epidermal stem cell population in murine epidermis. Sci. Rep. 4: 5831.
3. Bárcena, C., et al. 2015. Angiogenin secretion from hepatoma cells activates hepatic stellate cells to amplify a self-sustained cycle promoting liver cancer. Sci. Rep. 5: 7916.
4. Stefanovic, M., et al. 2016. Targeting glucosylceramide synthase upregulation reverts sorafenib resistance in experimental hepatocellular carcinoma. Oncotarget 7: 8253-8267.
5. Ohgaki, R., et al. 2017. Essential roles of L-type amino acid transporter 1 in syncytiotrophoblast development by presenting fusogenic 4F2hc. Mol. Cell. Biol. 37: e00427-16.
6. Anfuso, B., et al. 2018. Activation of hepatic stem cells compartment during hepatocarcinogenesis in a HBsAg HBV-transgenic mouse model. Sci. Rep. 8: 13168.
7. Morimoto, Y., et al. 2019. Prognostic significance of VEGF receptors expression on the tumor cells in skull base chordoma. J. Neurooncol. 144: 65-77.
8. Hsieh, M.J., et al. 2020. Inactivation of APC induces CD34 upregulation to promote epithelial-mesenchymal transition and cancer stem cell traits in pancreatic cancer. Int. J. Mol. Sci. 21: 4473.
9. Ghufran, H., et al. 2022. Tumoricidal effects of unprimed and curcumin-primed adipose-derived stem cells on human hepatoma Hep G2 cells under oxidative conditions. Tissue Cell 79: 101968.

PROTOCOLS

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