

CD34 (QBEnd/10): sc-52312

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.

REFERENCES

1. Buck, C.A., et al. 1994. Cell adhesion receptors and early mammalian heart development: an overview. *C. R. Acad. Sci. III, Sci. Vie* 316: 838-859.
2. DeLisser, H.M., et al. 1994. Platelet endothelial cell adhesion molecule (CD31). *Curr. Top. Microbiol. Immunol.* 184: 37-45.
3. Krause, D.S., et al. 1994. Characterization of murine CD34, a marker for hematopoietic progenitor and stem cells. *Blood* 84: 691-701.
4. Holyoake, T.L., et al. 1994. CD34⁺ positive haemopoietic cells: biology and clinical applications. *Blood Rev.* 8: 113-124.

CHROMOSOMAL LOCATION

Genetic locus: CD34 (human) mapping to 1q32.2.

SOURCE

CD34 (QBEnd/10) is a mouse monoclonal antibody raised against isolated leucocytes of human origin.

PRODUCT

Each vial contains 500 µl culture supernatant containing IgG₁ with < 0.1% sodium azide.

APPLICATIONS

CD34 (QBEnd/10) is recommended for detection of CD34 of human origin by Western Blotting (starting dilution to be determined by researcher, dilution range 1:10-1:200), immunoprecipitation [10-20 µl per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution to be determined by researcher, dilution range 1:10-1:200) and immunohistochemistry (including paraffin-embedded sections) (starting dilution to be determined by researcher, dilution range 1:10-1:200).

Suitable for use as control antibody for CD34 siRNA (h): sc-29249, CD34 shRNA Plasmid (h): sc-29249-SH and CD34 shRNA (h) Lentiviral Particles: sc-29249-V.

Molecular Weight of glycosylated CD34: 90-120 kDa.

Positive Controls: TF-1 cell lysate: sc-2412, CD34 (h): 293T Lysate: sc-113830 or HeLa whole cell lysate: sc-2200.

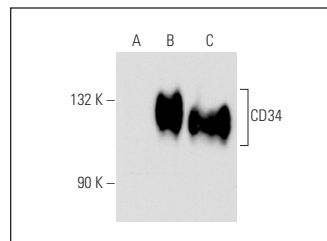
RESEARCH USE

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

STORAGE

For immediate and continuous use, store at 4° C for up to one month. For sporadic use, freeze in working aliquots in order to avoid repeated freeze/thaw cycles. If turbidity is evident upon prolonged storage, clarify solution by centrifugation.

DATA



CD34 (QBEnd/10): sc-52312. Western blot analysis of CD34 expression in non-transfected 293T: sc-117752 (A), human CD34 transfected 293T: sc-113830 (B) and TF-1 (C) whole cell lysates.

SELECT PRODUCT CITATIONS

1. Cheung, A.M., et al. 2010. Successful engraftment by leukemia initiating cells in adult acute lymphoblastic leukemia after direct intrahepatic injection into unconditioned newborn NOD/SCID mice. *Exp. Hematol.* 38: 3-10.
2. Fang, J.H., et al. 2011. MicroRNA-29b suppresses tumor angiogenesis, invasion, and metastasis by regulating matrix metalloproteinase 2 expression. *Hepatology* 54: 1729-1740.
3. Wang, S.Y., et al. 2012. Vasculogenic mimicry and its clinical significance in medulloblastoma. *Cancer Biol. Ther.* 13: 341-348.
4. He, C., et al. 2017. Epithelial-mesenchymal transition is superior to vessels-encapsulate tumor cluster in promoting metastasis of hepatocellular carcinoma: a morphological evidence. *J. Cancer* 8: 39-47.
5. Lin, X.J., et al. 2018. Hepatocellular carcinoma cell-secreted exosomal microRNA-210 promotes angiogenesis *in vitro* and *in vivo*. *Mol. Ther. Nucleic Acids* 11: 243-252.
6. Murtas, D., et al. 2019. Tyrosinase and nestin immunohistochemical expression in melanocytic nevi as a histopathologic pattern to trace melanocyte differentiation and neovogenesis. *Histochem. Cell Biol.* 151: 175-185.
7. Fang, J.H., et al. 2019. Vessels that encapsulate tumor clusters (VETC) pattern is a predictor of sorafenib benefit in patients with hepatocellular carcinoma. *Hepatology* 70: 824-839.

CONJUGATES

See **CD34 (IC0115): sc-7324** for CD34 antibody conjugates, including AC, HRP, FITC, PE, and Alexa Fluor® 488, 546, 594, 647, 680 and 790.