

CD34 (43A1): sc-65261

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. Krause, D.S., et al. 1994. Characterization of murine CD34, a marker for hematopoietic progenitor and stem cells. *Blood* 84: 691-701.
3. Holyoake, T.L. and Alcorn, M.J. 1994. CD34⁺ positive haemopoietic cells: biology and clinical applications. *Blood Rev.* 8: 113-124.

CHROMOSOMAL LOCATION

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

SOURCE

CD34 (43A1) is a mouse monoclonal antibody raised against KG-1a tumor cells of human origin.

PRODUCT

Each vial contains 100 µg IgG₃ in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

CD34 (43A1) 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), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and flow cytometry (1 µg per 1 x 10⁶ 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: CD34 (h): 293T Lysate: sc-113830, TF-1 cell lysate: sc-2412 or Hs68 cell lysate: sc-2230.

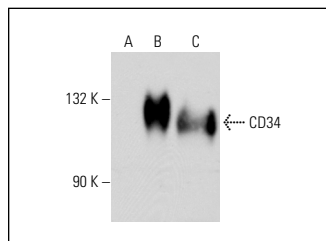
RESEARCH USE

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

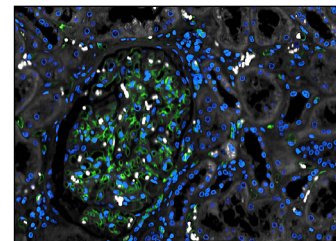
STORAGE

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

DATA



CD34 (43A1): sc-65261. 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.



CD34 (43A1): sc-65261. Immunofluorescence staining of formalin fixed, paraffin-embedded human kidney tissue showing membrane and cytoplasmic staining (green) of endothelial cells in glomerulus and interstitial endothelial cells in tubules, and nuclear DAPI counterstain (blue). Kindly provided by Professor Giorgio Cattoretti, M.D., Department of Surgical Pathology, Cytology, Medical Genetics and Nephropathology, ASST Monza, Ospedale San Gerardo.

SELECT PRODUCT CITATIONS

1. Wang, S., et al. 2009. Diabetes-relevant regulation of cultured blood outgrowth endothelial cells. *Microvasc. Res.* 78: 174-179.
2. Jinesh, G.G., et al. 2013. Blebbistatins, the emergency program for cancer stem cells: sphere formation and tumorigenesis after apoptosis. *Cell Death Differ.* 20: 382-395.
3. Paebst, F., et al. 2014. Comparative immunophenotyping of equine multipotent mesenchymal stromal cells: an approach toward a standardized definition. *Cytometry A* 85: 678-687.
4. Wang, X., et al. 2015. Combined therapy against recurrent and intracranial invasion of sinonasal hemangiopericytoma: a case report. *Oncol. Lett.* 10: 287-290.
5. Bai, Y., et al. 2017. Clinical analysis of the effect of anti-allergy treatment on pocket-related complications following pacemaker implantation. *Exp. Ther. Med.* 13: 2876-2882.
6. Luo, L., et al. 2018. Combination treatment of adipose-derived stem cells and adiponectin attenuates pulmonary arterial hypertension in rats by inhibiting pulmonary arterial smooth muscle cell proliferation and regulating the AMPK/BMP/Smad pathway. *Int. J. Mol. Med.* 41: 51-60.
7. Chen, Q., et al. 2019. Melittin inhibits hypoxia-induced vasculogenic mimicry formation and epithelial-mesenchymal transition through suppression of HIF-1 α /Akt pathway in liver cancer. *Evid. Based Complement. Alternat. Med.* 2019: 9602935.

CONJUGATES

See **CD34 (B-6): sc-74499** for CD34 antibody conjugates, including AC, HRP, FITC, PE, and Alexa Fluor[®] 488, 546, 594, 647, 680 and 790.