SANTA CRUZ BIOTECHNOLOGY, INC.

CD34 (ICO115): sc-7324

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 (ICO115) is a mouse monoclonal antibody raised against blast cells of a chronic myeloid leukemia patient.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

CD34 (ICO115) is available conjugated to agarose (sc-7324 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to either phycoerythrin (sc-7324 PE), fluorescein (sc-7324 FITC), Alexa Fluor® 488 (sc-7324 AF488), Alexa Fluor® 546 (sc-7324 AF546), Alexa Fluor® 594 (sc-7324 AF594) or Alexa Fluor® 647 (sc-7324 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-7324 AF680) or Alexa Fluor® 790 (sc-7324 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

In addition, CD34 (ICO115) is available conjugated to Alexa Fluor® 405 (sc-7324 AF405, 200 µg/ml), 100 tests in 2 ml, for IF, IHC(P) and FCM.

APPLICATIONS

CD34 (ICO115) 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: CD34 (h): 293T Lysate: sc-113830, TF-1 cell lysate: sc-2412 or rat kidney extract: sc-2394.

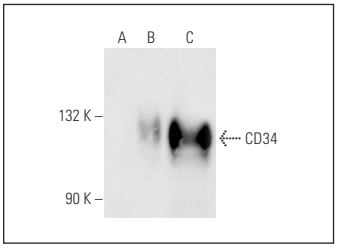
RESEARCH USE

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

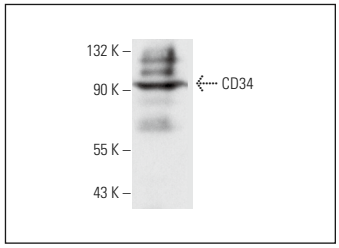
STORAGE

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

DATA



CD34 (ICO115): sc-7324. 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 (ICO115): sc-7324. Western blot analysis of CD34 expression in rat kidney tissue extract.

SELECT PRODUCT CITATIONS

1. DiMattia, G.E., et al. 1990. Human prolactin gene expression. The use of an alternative noncoding exon in decidua and the IM-9-P3 lymphoblast cell line. J. Biol. Chem. 265: 16412-16421.
2. Hong, X., et al. 2017. Transdifferentiated human vascular smooth muscle cells are a new potential cell source for endothelial regeneration. Sci. Rep. 7: 5590.
3. Motoike, S., et al. 2018. Cryopreserved clumps of mesenchymal stem cell/extracellular matrix complexes retain osteogenic capacity and induce bone regeneration. Stem Cell Res. Ther. 9: 73.
4. Lin, Y., et al. 2019. *In vitro* behavior of tendon stem/progenitor cells on bioactive electrospun nanofiber membranes for tendon-bone tissue engineering applications. Int. J. Nanomedicine 14: 5831-5848.
5. Park, C.S., et al. 2020. Development of colonic organoids containing enteric nerves or blood vessels from human embryonic stem cells. Cells 9: 2209.
6. Asgari Taei, A., et al. 2021. The conditioned medium of human embryonic stem cell-derived mesenchymal stem cells alleviates neurological deficits and improves synaptic recovery in experimental stroke. J. Cell. Physiol. 236: 1967-1979.
7. Liu, J., et al. 2022. Comprehensive analysis of lncRNA-miRNA-mRNA networks during osteogenic differentiation of bone marrow mesenchymal stem cells. BMC Genomics 23: 425.
8. Xu, P., et al. 2023. G9a inhibition promotes the formation of pacemaker-like cells by reducing the enrichment of H3K9me2 in the HCN4 promoter region. Mol. Med. Rep. 27: 21.

PROTOCOLS

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