SANTA CRUZ BIOTECHNOLOGY, INC.

CD34 (BI-3C5): sc-19621

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.

SOURCE

CD34 (BI-3C5) is a mouse monoclonal antibody that reacts with class I epitope CD34 of human origin, which is sensitive to neuramidase, glycoprotease and chymopapain.

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 (BI-3C5) is available conjugated to agarose (sc-19621 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-19621 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-19621 PE), fluorescein (sc-19621 FITC), Alexa Fluor® 488 (sc-19621 AF488), Alexa Fluor® 546 (sc-19621 AF546), Alexa Fluor® 594 (sc-19621 AF594) or Alexa Fluor® 647 (sc-19621 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-19621 AF680) or Alexa Fluor® 790 (sc-19621 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

CD34 (BI-3C5) is recommended for detection of the class I epitope of CD34 (which is sensitive to neuraminidase, chymopapain and glycoprotease) of 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 10^6 cells).

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: HeLa whole cell lysate: sc-2200, TF-1 cell lysate: sc-2412 or Hs68 cell lysate: sc-2230.

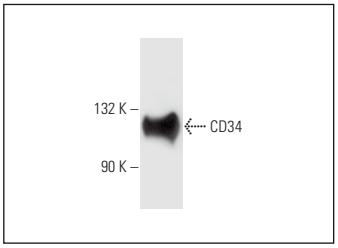
RESEARCH USE

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

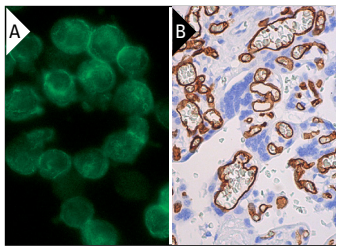
STORAGE

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

DATA



CD34 (BI-3C5): sc-19621. Western blot analysis of CD34 expression in TF-1 whole cell lysate.



CD34 (BI-3C5): sc-19621. Immunofluorescence staining of methanol-fixed TF-1 cells showing membrane staining (**A**). Immunoperoxidase staining of formalin fixed, paraffin-embedded human placenta tissue showing membrane and cytoplasmic staining of endothelial cells (**B**).

SELECT PRODUCT CITATIONS

1. Kook, S.H., et al. 2006. Satellite cells isolated from adult Hanwoo muscle can proliferate and differentiate into myoblasts and adipose-like cells. Mol. Cells 22: 239-245.
2. Miao, Y., et al. 2016. A comparative analysis of ESM-1 and vascular endothelial cell marker (CD34/CD105) expression on pituitary adenoma invasion. Pituitary 19: 194-201.
3. Tomasello, L., et al. 2017. Mesenchymal stem cells derived from inflamed dental pulpal and gingival tissue: a potential application for bone formation. Stem Cell Res. Ther. 8: 179.
4. Qu, B., et al. 2018. MIG7 is involved in vasculogenic mimicry formation rendering invasion and metastasis in hepatocellular carcinoma. Oncol. Rep. 39: 679-686.
5. Stocco, E., et al. 2019. Infrapatellar fat pad stem cells responsiveness to microenvironment in osteoarthritis: from morphology to function. Front. Cell Dev. Biol. 7: 323.
6. García, M., et al. 2020. The immune-checkpoint HLA-G/ILT4 is involved in the regulation of VEGF expression in clear cell renal cell carcinoma. BMC Cancer 20: 624.
7. Xie, Y., et al. 2021. Mesenchymal stem cells from different sources show distinct therapeutic effects in hyperoxia-induced bronchopulmonary dysplasia in rats. J. Cell. Mol. Med. 25: 8558-8566.
8. Zarina, K.Z., et al. 2022. Expression of markers Ki-67, nestin, VEGF, CD34 and apoptosis in relatively healthy lung tissue with non-changed and metaplastic bronchial epithelium. Med. Sci. 11: 7.

PROTOCOLS

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