



CD34 (151-290): sc-4300 WB

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. Satterthwaite, A.B., Burn, T.C., Le Beau, M.M. and Tenen, D.G. 1992. Structure of the gene encoding CD34, a human hematopoietic stem cell antigen. *Genomics* 12: 788-794.
2. Simmons, D.L., Satterthwaite, A.B., Tenen, D.G. and Seed, B. 1992. Molecular cloning of a cDNA encoding CD34, a sialomucin of human hematopoietic stem cells. *J. Immunol.* 148: 267-271.
3. Majdic, O., Stockl, J., Pickl, W.F., Bohuslav, J., Strobl, H., Scheinecker, C., Stockinger, H. and Knapp, W. 1994. Signaling and induction of enhanced cytoadhesiveness via the hematopoietic progenitor cell surface molecule CD34. *Blood* 83: 1226-1234.
4. Krause, D.S., Ito, T., Fackler, M.J., Smith, O.M., Collector, M.I., Sharkis, S.J. and May, W.S. 1994. Characterization of murine CD34, a marker for hematopoietic progenitor and stem cells. *Blood* 84: 691-701.
5. Holyoake, T.L. and Alcorn, M.J. 1994. CD34⁺ positive haemopoietic cells: biology and clinical applications. *Blood Rev.* 8: 113-124.
6. Lasky, L.A. 1995. Selectin-carbohydrate interactions and the initiation of the inflammatory response. *Annu. Rev. Biochem.* 64: 113-139.
7. Drew, E., Merzaban, J.S., Seo, W., Ziltener, H.J. and McNagny, K.M. 2005. CD34 and CD43 inhibit mast cell adhesion and are required for optimal mast cell reconstitution. *Immunity* 22: 43-57.
8. Syme, R., Bajwa, R., Robertson, L., Stewart, D. and Gluck S. 2005. Comparison of CD34 and monocyte-derived dendritic cells from mobilized peripheral blood from cancer patients. *Stem Cells* 23: 74-81.
9. Young, M.R. and Cigal, M. 2005. Tumor skewing of CD34⁺ cell differentiation from a dendritic cell pathway into endothelial cells. *Cancer Immunol. Immunother.* 16: 1-11.

CHROMOSOMAL LOCATION

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

SOURCE

CD34 (151-290) is expressed in *E. coli* as a 42 kDa tagged fusion protein corresponding to amino acids 151-290 of CD34 of human origin.

RESEARCH USE

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

PRODUCT

CD34 (151-290) is purified from bacterial lysates (>98%) by glutathione agarose affinity chromatography; supplied as 10 µg in 0.1 ml SDS-PAGE loading buffer.

APPLICATIONS

CD34 (151-290) is suitable as a Western blotting control for sc-9095.

STORAGE

Store at -20° C; stable for one year from the date of shipment.