

CD34 Monoclonal Antibody (BI-3C5)

Catalog Number07-3403

Product data sheet

Details		Species Reactivity	
Size	100 µg	Species reactivity	Human
Host/Isotope	Mouse / IgG1	Published species	Human, Not Applicable
Class	Monoclonal	Tested Applications	
Type	Antibody	Flow Cytometry (Flow)	Dilution *1:25-1:50
Clone	BI-3C5	Immunohistochemistry (IHC)	Assay-dependent
Immunogen	to the human CD4	Western Blot (WB)	1:500-1:2,000
Conjugate	Unconjugated	Published Applications	
Form	Liquid	Immunohistochemistry (IHC)	See 6 publications below
Concentration	1 mg/mL	Immunocytochemistry (ICC/IF)	See 1 publications below
Purification	Affinity chromatography	Miscellaneous PubMed (Misc)	See 1 publications below
Storage buffer	PBS, pH 8.2	Western Blot (WB)	See 1 publications below
Contains	0.1% sodium azide	* Suggested working dilutions are given as a guide only. It is recommended that the user titrate the product for use in their own experiment using appropriate negative and positive controls.	
Storage Conditions	-20°C		

Background/Target Information

CD34 is a highly glycosylated monomeric with a molecular weight range of 111-115 kDa surface protein that is present on many stem cell populations. CD34 is a stem cell marker although its expression on human hematopoietic stem cells is reversible. CD34 may serve as a surface receptor that undergoes receptor-mediated endocytosis and regulates adhesion, differentiation and proliferation of hematopoietic stem cells and other progenitors. CD34 expression is likely to represent a specific state of hematopoietic development that may have altered adhering properties with expanding and differentiating capabilities in both in vitro and in vivo conditions. CD34 is possibly an adhesion molecule with a putative role for mediating the attachment of stem cells to the bone marrow extracellular matrix or directly to stromal cells. Further, CD34 could act as a scaffold for the attachment of lineage specific glycans, allowing stem cells to bind to lectins expressed by stromal cells or other marrow components. CD34 is thought to have a role in presenting carbohydrate ligands to selectins. The intracellular chain of the CD34 antigen is a site of phosphorylation by activated protein kinase C suggesting a putative role in signal transduction. Diseases associated with CD34 dysfunction include dermatofibrosarcoma and neurofibroma.

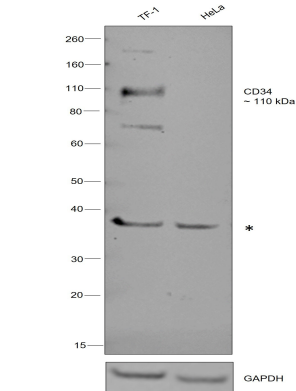
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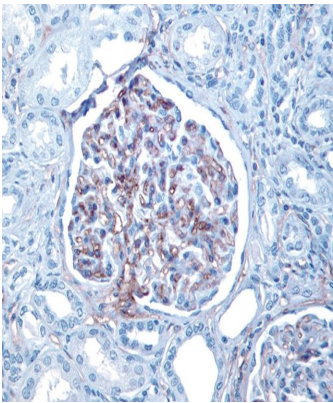
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Product Images For CD34 Monoclonal Antibody (BI-3C5)



CD34 Antibody (07-3403) in WB

Western blot was performed using Anti-CD34 Monoclonal Antibody (BI-3C5) (Product # 07-3403) and a 110 kDa band corresponding to Hematopoietic progenitor cell antigen CD34 was observed in TF-1, which is reported to be a positive cell line for the antigen and no expression was observed in HeLa, negative cell line. Whole cell extracts (60 µg lysate) of TF-1 and HeLa prepared using NP40 Lysis Buffer (FNN0021-TFS) were electrophoresed using NuPAGE™ 4-12% Bis-Tris Protein Gel (Product # NP0322BOX). Resolved proteins were then transferred onto a nitrocellulose membrane (Product # IB23001) by iBlot® 2 Dry Blotting System (Product # IB21001). The blot was probed with the primary antibody (1:1000 dilution) and detected by chemiluminescence with Goat anti-Mouse IgG (H+L) Superclonal™ Recombinant Secondary Antibody, HRP (Product # A28177, 1:20000 dilution) using the iBright™ FL1500 Imaging System (Product # A44115). Chemiluminescent detection was performed using SuperSignal™ West Atto Ultimate Sensitivity Substrate (Product # A38556). An uncharacterized band (*) was observed at ~38 kDa in both the cell lines.



CD34 Antibody (07-3403) in IHC

Immunohistochemical staining of human kidney tissue using Ms ant-CD34 (clone BI-3C5) (Product # 07-3403).

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PubMed References For CD34 Monoclonal Antibody (BI-3C5)

6 Immunohistochemistry References

Species / Dilution	Summary
	07-3403 was used in Immunohistochemistry to conclude that although SCAD is rarely associated with hereditary connective tissue disorders, there does not seem to be a more generalizable global connective tissue ultrastructural abnormality in most cases.
Human / Not Cited	Cardiovascular research (2022; 118: 1835) "Vascular histopathology and connective tissue ultrastructure in spontaneous coronary artery dissection: pathophysiological and clinical implications." Author(s):Margaritis M,Saini F,Baranowska-Clarke AA,Parsons S,Vink A,Budgeon C,Allcock N,Wagner BE,Samani NJ, von der Thüsen J,Robertus JL,Sheppard MN,Adlam D PubMed Article URL: http://dx.doi.org/10.1093/cvr/cvab183
Human / Not Cited	07-3403 was used in Immunohistochemistry to examine the expression and cellular distribution pattern of endothelial nitric oxide synthase in the developing human retina and compare its expression with that in rats.
Human / Not Cited	Investigative ophthalmology & visual science (2006; 47: 2141) "Endothelial nitric oxide synthase is expressed in amacrine cells of developing human retinas." Author(s):Li S,Tay D,Shu S,Bao X,Wu Y,Wang X,Yip HK PubMed Article URL: http://dx.doi.org/10.1167/iov.04-1202
Human / 1:200	07-3403 was used in immunohistochemistry - paraffin section to study angiodyplasia and other pathological changes associated with symptomatic hemorrhoids
Human / 1:200	Drug design, development and therapy (2016; 9: 4649) "Myofibrotic malformation vessels: unique angiodyplasia toward the progression of hemorrhoidal disease." Author(s):Li SL,Jing FY,Ma LL,Guo LL,Na F,An SL,Ye Y,Yang JM,Bao M,Kang D,Sun XL,Deng YJ PubMed Article URL: http://dx.doi.org/10.2147/DDDT.S90209
Human / Not Cited	07-3403 was used in Immunohistochemistry to suggest that blood vessel organoids derived from human stem cells faithfully recapitulate the structure and function of human blood vessels and are a suitable model for diabetic vasculopathy.
Human / Not Cited	Nature (2019; 565: 505) "Human blood vessel organoids as a model of diabetic vasculopathy." Author(s):Wimmer RA,Leopoldi A,Aichinger M,Wick N,Hantusch B,Novatchkova M,Taubenschmid J,Hämmerle M,Esk C, Bagley JA,Lindenhofer D,Chen G,Boehm M,Agu CA,Yang F,Fu B,Zuber J,Knoblich JA,Kerjaschki D,Penninger JM PubMed Article URL: http://dx.doi.org/10.1038/s41586-018-0858-8
Not Applicable / 1:50	07-3403 was used in immunohistochemistry to discuss recurrent intracranial hemangiopericytoma with multiple metastases
Not Applicable / 1:50	Chinese medical journal (2006; 119: 169) "Recurrent intracranial hemangiopericytoma with multiple metastases." Author(s):Cao Y,Zhang MZ,Wang JM,Zhang W,Li G,Zhao JZ PubMed Article URL: http://www.ncbi.nlm.nih.gov/pubmed/16455002
	07-3403 was used in Immunohistochemistry to demonstrate that VETC+ HCC is associated with suppression of tumor immune responses at the molecular level.
Human / Not Cited	International journal of cancer (2022; 151: 2278) "The presence of vessels encapsulating tumor clusters is associated with an immunosuppressive tumor microenvironment in hepatocellular carcinoma." Author(s):Zhang P,Ono A,Fujii Y,Hayes CN,Tamura Y,Miura R,Shirane Y,Nakahara H,Yamauchi M,Uchikawa S,Uchida T, Teraoka Y,Fujino H,Nakahara T,Murakami E,Miki D,Kawaoka T,Okamoto W,Makokha GN,Imamura M,Arihiro K, Kobayashi T,Ohdan H,Fujita M,Nakagawa H,Chayama K,Aikata H PubMed Article URL: http://dx.doi.org/10.1002/ijc.34247

1 Immunocytochemistry References

Species / Dilution	Summary
	07-3403 was used in Immunocytochemistry to describe cells suitable for an eventual regenerative medicine.
Human / 1:100	Stem cell reviews and reports (2017; 13: 491) "Characterization of Tunneling Nanotubes in Wharton's jelly Mesenchymal Stem Cells. An Intercellular Exchange of Components between Neighboring Cells." Author(s):Sanchez V,Villalba N,Fiore L,Luzzani C,Miriuka S,Boveris A,Gelpi RJ,Brusco A,Poderoso JJ PubMed Article URL: http://dx.doi.org/10.1007/s12015-017-9730-8

1 Miscellaneous PubMed References

Species / Dilution	Summary
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07-3403 was used in immunohistochemistry to present a case of not otherwise specified-type sarcoma with CD10 expression in the left breast.

Human / Not Cited

Diagnostic pathology (2013; 8:)
"Is mammary not otherwise specified-type sarcoma with CD10 expression a distinct entity? A rare case report with immunohistochemical and ultrastructural study."
Author(s):Yang GZ,Li J,Jin H,Ding HY
PubMed Article URL:<http://dx.doi.org/10.1186/1746-1596-8-14>

1 Western Blot References

Species / Dilution	Summary
	07-3403 was used in western blot to examine the subproteome of mitochondria isolated from human donor retinal pigment epithelium graded with the Minnesota Grading System
Not Applicable / 1:1500	Investigative ophthalmology & visual science (2008; 49: 2848) "Mitochondrial proteomics of the retinal pigment epithelium at progressive stages of age-related macular degeneration." Author(s):Nordgaard CL,Karunadharma PP,Feng X,Olsen TW,Ferrington DA PubMed Article URL: http://dx.doi.org/10.1167/iovs.07-1352

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