Anti-human CD31/PECAM-1

20151001BB

FOR RESEARCH ONLY! NOT FOR HUMAN USE!

Cat.-no.:	**102-PA07S**
Size:	100 µg
Lot. No.:	According to product label
Country of origin:	Germany

Preparation: Produced from sera of rabbits pre-immunized with highly pure (>98%) recombinant human sCD31 (Gln28-Lys601) derived from insect cells.

Target Background

Synonyms:	CD31 antigen, EndoCAM, PECA1, PECAM1

PECAM is transmembrane glycoprotein that belongs to the Ig-related superfamily of adhesion molecules. It is highly expressed at endothelial cell junctions, and is also expressed in platelets and most leukocyte sub-types. The primary function of PECAM-1 is the mediation of leukocyte-endothelial cell adhesion and signal transduction. PECAM-1 has been implicated in the pathogenesis of various inflammation-related disorders, including thrombosis, multiple sclerosis (MS), and rheumatoid arthritis. The human PECAM-1 gene codes for a 738 amino acid transmembrane glycoprotein that contains a 118 amino acid cytoplasmic domain, a 19 amino acid transmembrane domain, and a 574 amino acid extracellular domain. Recombinant human soluble PECAM-1 is a 574 amino acid glycoprotein comprising the extracellular domain of PECAM-1 fused to a C terminal His-tag (6xHis). Monomeric glycosylated PECAM-1 migrates at an apparent molecular weight of approximately 80.0-95.0 kDa by SDS-PAGE analysis under reducing conditions. The calculated molecular weight of recombinant human PECAM-1 is 64.3 kDa.

References

1. Simmons DL et al, J Exp Med 171:2147-2152, 1990
2. Stockinger H et al, J Immunol 145:3889-3897, 1990
3. Newman PJ et al, Science 247:1219-1222, 1990
4. Albelda SM et al, J Cell Biol 114:1059-1068, 1991
5. Kirschbaum NE et al, Blood 84:4028-4037, 1994
6. Tang DG et al, J Biol Chem 268:22883-22894, 1993
7. Brown S et al, Nature 418:200-203, 2002
8. Wang Y et al, Am J Physiol 284:H1008-H1017, 2003

Database References Antigen

Protein RefSeq:	NP_00433.4
Uniprot ID:	P16284
mRNA RefSeq:	NM_00442.4

Product Specifications

Species reactivity	human
Clone/Ab feature	rabbit IgG
Cross reactivity	n.d.
Host	rabbit
Clonality	polyclonal
Purification	Protein A purified
Immunogen	recombinant human sCD31 (RT #S01-071)
Formulation	Lyophilized
Buffer	5 mM PBS, pH 7.2

Stability: The lyophilized antibody is stable at room temperature for up to 1 month. The reconstituted antibody is stable for at least two weeks at 2-8°C. Frozen aliquots are stable for at least 6 months when stored at -20°C.

Reconstitution: Centrifuge vial prior to opening. Reconstitute in sterile water to a concentration of 0.1-1.0 mg/ml.

AVOID REPEATED FREEZE AND THAW CYCLES!

Applications

Western Blot:	Use at 1-5 µg/ml
IF:	Use at 2-10 µg/ml
IF/IHC	Use at 1-5 µg/ml

NOTE: OPTIMAL DILUTIONS SHOULD BE DETERMINED BY EACH LABORATORY FOR EACH APPLICATION!

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Handling/Applications

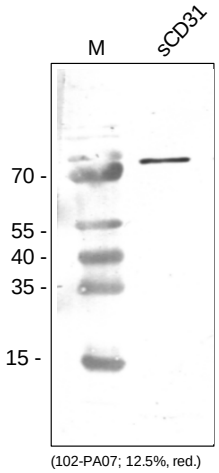

Figure 1: Western analysis of recombinant human sCD31 [Cat# S01-071] using a rabbit anti-human CD31 polyclonal antibody.

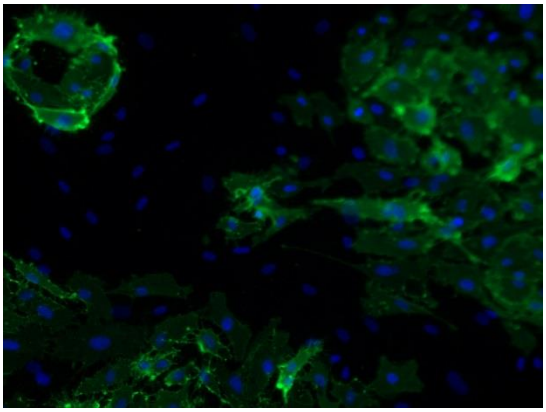

Figure 2: Immunofluorescence staining of human CD31 in a mixture of primary human endothelial cells (HDLEC, HUVEC) and primary normal human dermal firbroblast (NHDF) with a polyclonal rabbit anti-human CD31 antibody **[Cat# 102-PA07]**. Conjugated secondary antibody: donkey anti-rabbit ALEXA Flour 488 (1:600) [Dianova].

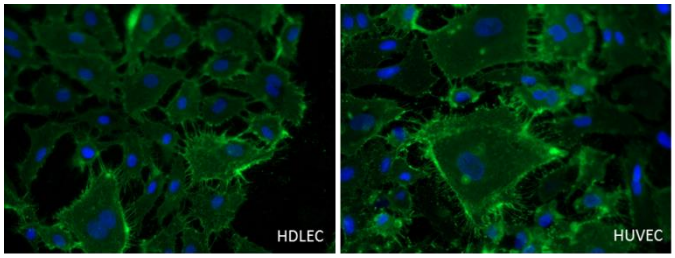

Figure 3: Immunofluorescence staining of human CD31 in primary human dermal lymphatic endothelial cells (HDLEC) and primary human umbilical vein endothelial cells (HUVEC) with a polyclonal rabbit anti-human CD31 antibody **[Cat# 102-PA07]**. Conjugated secondary antibody: donkey anti-rabbit ALEXA Flour 488 (1:600) [Dianova].

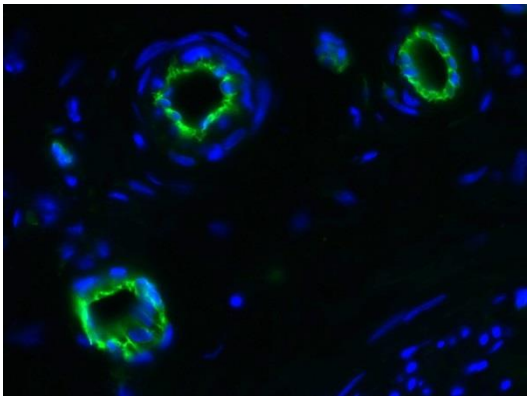

Figure 4: Immunofluorescence staining (cryo-sections) of vasa vasorum of a human lymphatic collector. (fixed 15 min in 4% PFA) with anti-human CD31 (5µg/ml) [Cat# 102-PA07] and counter staining of nuclei with Dapi. [400X]
The experiment was performed by the research group of Prof. Dr. J. Wilting and Dr. K. Buttler, University Göttingen, Germany.