

36-3005: Monoclonal Antibody to CD31 (Clone: C31.7)

Clonality :	Monoclonal
Clone Name :	C31.7
Application :	FACS
Reactivity :	Human
Gene :	PECAM1
Gene ID :	5175
Uniprot ID :	P16284
Format :	Purified
Alternative Name :	PECAM1
Isotype :	Mouse IgG1, kappa
Immunogen Information :	Human recombinant CD31 protein was used as immunogen for this antibody.

Description

CD31 (PECAM-1, or platelet endothelial cell adhesion molecule-1) is a surface protein expressed by endothelial cells, monocytes, platelets, granulocytes, and lymphocyte subsets, and makes up a large portion of endothelial intercellular junctions. CD31 is a member of the immunoglobulin superfamily and is likely involved in leukocyte migration, angiogenesis, and integrin activation. Reports indicate that CD31 interacts with CD38 and is involved in cellular interactions resulting in wound healing and angiogenesis. Expression of CD31 on CD4+ T lymphocytes, helps to control T lymphocyte activation, because in the absence of CD31, T cells have a greater propensity to become activated, resulting in increased susceptibility to become apoptotic. This impact of CD31 loss becomes most pronounced during severe, inflammatory, and immunological stresses such as those caused by systemic Salmonella infection. This identifies a novel role for CD31 in regulating CD4 T homeostasis. This monoclonal antibody recognizes a 100kDa glycoprotein in endothelial cells and 130 kDa in platelets. This antibody reacts with endothelial cells in normal tissues and in benign and malignant proliferations. In cryostat sections and blood smears the antibody also stains megakaryocytes, platelets and occasionally plasma cells. It reacts weakly with mantle zone B cells, peripheral T cells, and neutrophils. Antibody to CD31 is of value in the study of benign and malignant vascular tumors. Staining for CD31 has also been used to measure angiogenesis, which reportedly predicts tumor recurrence.

Product Info

Amount :	100 µg
Purification :	Protein G Chromatography
Content :	25 µg in 50 µl/100 µg in 200 µl PBS containing 0.05% BSA and 0.05% sodium azide. Sodium azide is highly toxic.
Storage condition :	Store the antibody at 4°C; stable for 6 months. For long-term storage; store at -20°C. Avoid repeated freeze and thaw cycles.

Application Note

Flow Cytometry (5ul per test per one million cells or 5ul per 100ul of whole blood), Immunofluorescence (1:50-1:100 for 30 minutes at RT)

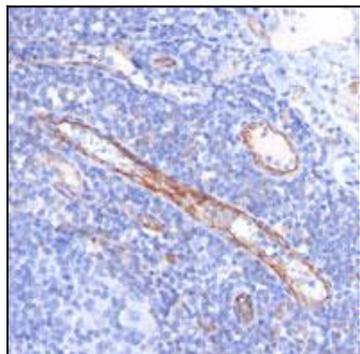


Fig: 1 Immunohistochemical analysis of CD31 in human Angiosarcoma using CD31 antibody (Clone: C31.7) at 1:100 dilution.

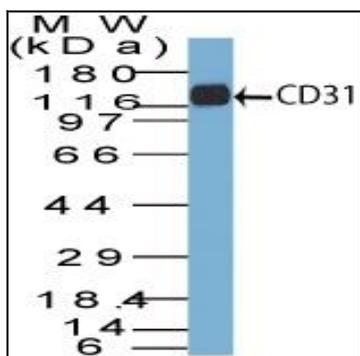


Fig: 2 Western blot analysis of CD31. Anti-CD31 antibody (Clone: C31.7) was used at 1 µg/ml in THP-1 lysate.