



Product Specification Sheet

Platelet endothelial cell adhesion molecule antibody

□ Cat # PECAM1-A

Rabbit anti-Mouse PECAM-1/CD31 antibody

SIZE: 100 µg

Platelet endothelial cell adhesion molecule 1 (PECAM1) also known as CD31, is a type I integral membrane glycoprotein and a member of the immunoglobulin superfamily of cell surface receptors. PECAM1 is a 130 kDa type I transmembrane glycoprotein encoded by the PECAM1 gene found on chromosome 17. The Extracellular Domain (ECD) of PECAM-1 has ten potential N-linked glycosylation sites and six C2-type Ig-like domains, the first of which is critical for adhesion and extravasation. The cytoplasmic domain contains Immunoregulatory Tyrosine-based Inhibitory and Switch Motifs (ITIM, ITSM) that mediate both inhibition and activation via phosphotyrosine-mediated engagement of SH2-containing signaling molecules. PECAM1 is constitutively expressed on the surface of endothelial cells and is specifically concentrated at the junction between them. Therefore, PECAM-1 antibodies are commonly used as endothelial markers to measure angiogenesis in association with tumor recurrence. It is also weakly expressed on many peripheral lymphoid cells and platelets. PECAM-1 plays a key role in removing aged neutrophils from the body.

Source of Antigen or Antibodies

Uniprot: Q08481

Host: Rabbit

Clonality: Polyclonal

Purification: Ammonium sulfate followed by peptide affinity purification

Immunogen: Synthetic peptide derived from within region 100-200 (extracellular) of Mouse CD31 conjugated KLH

Cross reactivity: The peptide used as an immunogen exhibits 80% homology with Pig, Goat, and Sheep. Due to low homology it is not recommended to use in other species. Reactivity has only been confirmed in Mouse samples

Subcellular Location: Cell membrane, Membrane raft, Cell junction

Alternative names: CD31

Recommended Secondary Antibody: Goat anti-Rabbit IgG-HRP (**ADI cat#20320**)

Form & Storage of Antibodies

□ **Affinity pure IgG Solution**

Concentration: 0.5 mg/ml Volume: 200 µl
Supplied in PBS, pH 7.4 + 0.1% BSA
The antibody can be made available carrier free or conjugated to HRP, Biotin, or FITC on request

□ **Lyophilized powder**

Reconstitute powder in 200 µl distilled water to 0.5 mg/ml

Storage:

Short-term: 4°C for 1 month

Long-term: at -20°C or below in suitable aliquots after reconstitution for 1 year. Do not expose to multiple freeze/thaw cycles or store working, diluted solutions. Glycerol may be added to a final concentration of 50% and antibodies can be stored un-aliquoted at -20°C.

Recommended Usage

ELISA: Assay dependent concentration. Typically, between 0.1-2.0 µg/ml for capture/detection antibodies.

Western Blotting: 0.5-1.0 µg/ml

Predicted band size: 81.2 kDa
Observed band size: ~130 kDa.

Immunohistochemistry: 1-10 µg/ml. QC tested using 10 mM sodium citrate pH 6 antigen retrieval buffer. The antibody may work better with other retrieval solutions or no antigen retrieval.

The above concentrations are a *suggestion*, user's must optimize their assay based on their own conditions. The antibody may work in other applications such as Immunocytochemistry or Immunoprecipitation. These methods have not been tested by ADI.

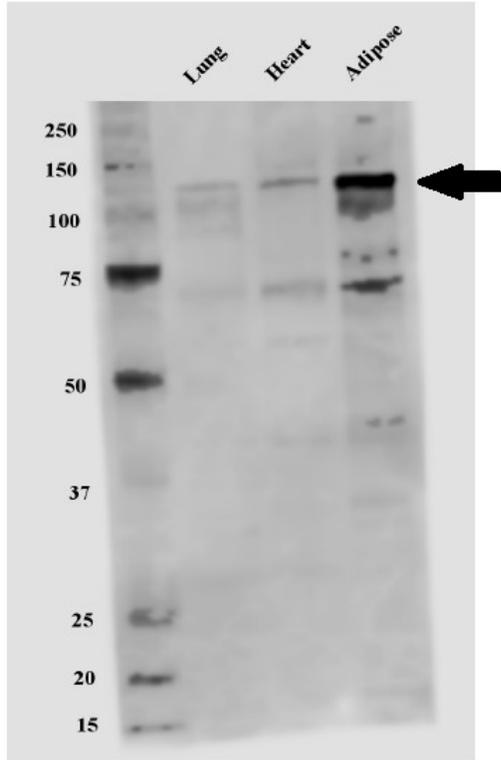
**This product is for In vitro research use only.*

Related materials available from ADI

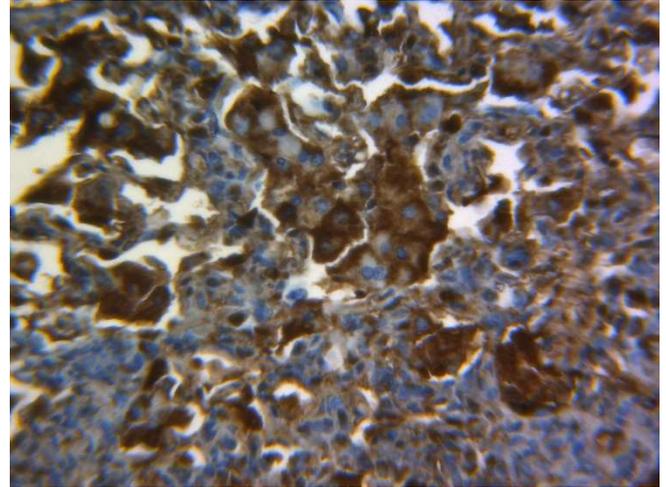
Catalog#	Description'
HCD34-A	Rabbit anti-Human CD34 antibody
CD45-D1-50	Mouse Monoclonal Anti-Human CD45
FITC/CD14 PE	
CD45F-100	Mouse Monoclonal Anti-Human CD45-FITC
CD45P-100	Mouse Monoclonal Anti-Human CD45-PE
CD45PC-100	Mouse Monoclonal Anti-Human CD45-PE-Cy5
GFAP11-A	Rabbit anti-Mouse phospho Glial fibrillary acidic protein (S266) antibody
GFAP21-A	Rabbit anti-Mouse Glial fibrillary acidic protein (GFAP) antibody

PECAM1-A

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Western blotting: 20 µg of whole Mouse Lung, Heart, and Adipose tissue lysates were heated for 5 minutes at 95°C then electrophoretically separated on a 10% SDS-PAGE gel. The gel was run at 100V for ~1 hour and 30 minutes then transferred to a 0.2 µm nitrocellulose membrane using the 'Mixed MW' settings on a Transblot Turbo (Biorad). The blot was blocked for 1 hour at room temperature with 1% Casein. **PECAM1-A** was diluted with TBST+0.1% BSA to 1 µg/ml and incubated overnight at 4°C. The blot was washed with TBS-T 3 times for 5 minutes each. Goat anti-rabbit IgG HRP (**ADI cat#20320**) was diluted in TBST+0.1% BSA at a 1:10,000 dilution (50 ng/ml) then incubated for 1 hour at room temperature. The blot was washed 3 times with TBS-T for 5 minutes each. The blot was then incubated with ADI Femto ECL substrate (**ADI cat#80210**) for 5 minutes and imaged on a CCD imaging system (C-DiGit, LI-COR).



Immunohistochemistry: FFPE Mouse Lung slide was heated for 20 minutes at 60°C then deparaffinized. Antigen retrieval was performed for 10 minutes at 95°C in a microwave using 10 mM pH 6, sodium citrate buffer. The slide was then cooled for 20 minutes at room temperature before being blocked for 30 minutes with 2.5% normal goat serum. **PECAM1-A** was diluted to 5 µg/ml in TBST+0.1% BSA and incubated overnight at 4°C. The slide was then washed twice and incubated with 3% hydrogen peroxide for 10 minutes to quench endogenous peroxidase. The slide was washed then incubated with Goat anti-Rabbit IgG HRP polymer detection reagent for 30 minutes at room temperature. The slide was washed twice, incubated with DAB for 3 minutes, washed with distilled water, then counterstained for 1 minute with Gil's II Hematoxylin before being cover-slipped.