10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

CD9 Antibody (Center)

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP1482D

Product Information

Application	WB, IHC-P, IF, E
Primary Accession	P21926
Reactivity	Human, Rat
Predicted	Mouse, Bovine, Canine, Rabbit
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Calculated MW	25416
Antigen Region	115-145

Additional Information

Gene ID	928
Other Names	CD9 antigen, 5H9 antigen, Cell growth-inhibiting gene 2 protein, Leukocyte antigen MIC3, Motility-related protein, MRP-1, Tetraspanin-29, Tspan-29, p24, CD9, CD9, MIC3, TSPAN29
Target/Specificity	This CD9 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 115-145 amino acids from the Central region of human CD9.
Dilution	WB~~1:1000 IHC-P~~1:100 IF~~1:10~50 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.
Storage	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	CD9 Antibody (Center) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	CD9 {ECO:0000303|PubMed:1840589, ECO:0000312|HGNC:HGNC:1709}
Function	Integral membrane protein associated with integrins, which regulates different processes, such as sperm-egg fusion, platelet activation and

	aggregation, and cell adhesion (PubMed:14575715, PubMed:18541721, PubMed:8478605). Present at the cell surface of oocytes and plays a key role in sperm-egg fusion, possibly by organizing multiprotein complexes and the morphology of the membrane required for the fusion (By similarity). In myoblasts, associates with CD81 and PTGFRN and inhibits myotube fusion during muscle regeneration (By similarity). In macrophages, associates with CD81 and beta-1 and beta-2 integrins, and prevents macrophage fusion into multinucleated giant cells specialized in ingesting complement-opsonized large particles (PubMed:12796480). Also prevents the fusion between mononuclear cell progenitors into osteoclasts in charge of bone resorption (By similarity). Acts as a receptor for PSG17 (By similarity). Involved in platelet activation and aggregation (PubMed:18541721). Regulates paranodal junction formation (By similarity). Involved in cell adhesion, cell motility and tumor metastasis (PubMed:7511626, PubMed:8478605).
Cellular Location	Cell membrane; Multi-pass membrane protein. Membrane; Multi-pass membrane protein. Secreted, extracellular exosome {ECO:0000250|UniProtKB:P40240}. Note=Present at the cell surface of oocytes. Accumulates in the adhesion area between the sperm and egg following interaction between IZUMO1 and its receptor IZUMO1R/JUNO {ECO:0000250|UniProtKB:P40240}
Tissue Location	Detected in platelets (at protein level) (PubMed:19640571). Expressed by a variety of hematopoietic and epithelial cells (PubMed:19640571).

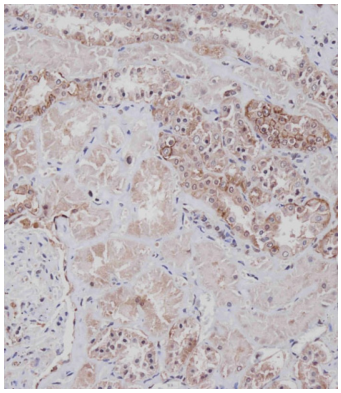
Background

CD9 is a member of the transmembrane 4 superfamily, also known as the tetraspanin family. Most of these members are cell-surface proteins that are characterized by the presence of four hydrophobic domains. The proteins mediate signal transduction events that play a role in the regulation of cell development, activation, growth and motility. This protein is a cell surface glycoprotein that is known to complex with integrins and other transmembrane 4 superfamily proteins. It can modulate cell adhesion and migration and also trigger platelet activation and aggregation. In addition, the protein appears to promote muscle cell fusion and support myotube maintenance.

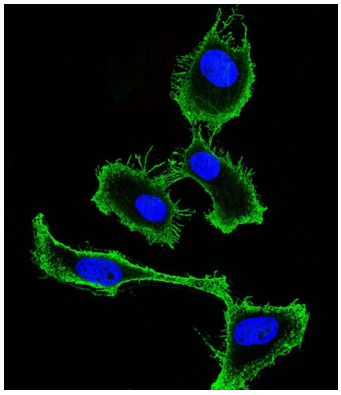
References

Ovalle,S., Int. J. Cancer 121 (10), 2140-2152 (2007)
Kovalenko,O.V., Mol. Cell Proteomics 6 (11), 1855-1867 (2007)
Abache,T., J. Cell. Biochem. 102 (3), 650-664 (2007)
Horejsi,V., FEBS Lett. 288 (1-2), 1-4 (1991)

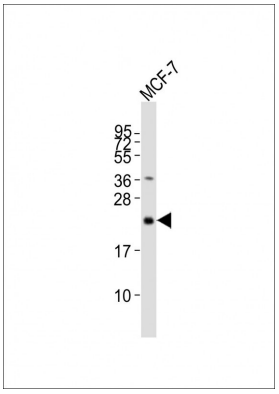
Images



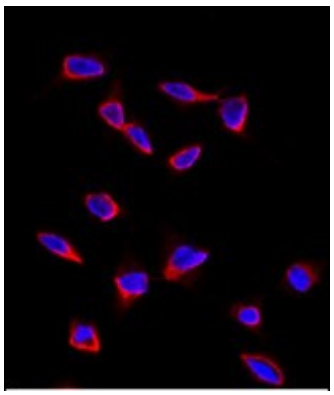
Immunohistochemical analysis of AP1482D on paraffin-embedded Human kidney tissue. Tissue was fixed with formaldehyde at room temperature. Heat induced epitope retrieval was performed by EDTA buffer (pH9. 0). Samples were incubated with primary antibody(1:100) for 1 hour at room temperature. Undiluted CRF Anti-Polyvalent HRP Polymer antibody was used as the secondary antibody.



Immunofluorescent analysis of 4% paraformaldehyde-fixed, 0.1% Triton X-100 permeabilized Hela (Human Cervical epithelial adenocarcinoma cell line) cells labeling CD9 with AP1482d at 1/25 dilution, followed by Dylight® 488-conjugated goat anti-rabbit IgG (NK179883) secondary antibody at 1/200 dilution (green). Immunofluorescence image showing membrane staining on Hela cell line. The nuclear counter stain is DAPI (blue).



Anti-CD9 Antibody (Center)at 1:2000 dilution + MCF-7 whole cell lysates Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/10000 dilution Predicted band size : 25 kDa Blocking/Dilution buffer: 5% NFDM/TBST.



Immunofluorescence analysis of anti-CD9 Antibody (Center) in HeLa cells. 0.025 mg/ml primary antibody was followed by Alexa-Fluor-546-conjugated donkey anti-rabbit lgG (H+L). Alexa-Fluor-546 emits orange fluorescence. Blue counterstaining is DAPI.

Citations

- Diagnostic and prognostic relevance of circulating exosomal miR-373, miR-200a, miR-200b and miR-200c in patients with epithelial ovarian cancer.

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