abcam

ab254175

Anti-CD9 antibody [P1/33/2]

Recombinant

Key facts

Isotype	IgG1
Host species	Mouse
Storage buffer	pH: 7.2 - 7.4 Preservative: 0.01% Sodium azide Constituents: PBS, 40% Glycerol (glycerin, glycerine), 0.05% BSA
Form	Liquid
Clonality	Monoclonal
Immunogen	The exact immunogen used to generate this antibody is proprietary information.
Clone number	P1/33/2
Purification technique	Affinity purification Protein A
Concentration	0.903 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

Flow Cyt

Tested

Species	Human
Dilution info	1.006 µg/mL
Notes	-

IHC-P

Not recommended

Species	Human
Dilution info	-
Notes	-

ICC/IF

Tested

Species	Human
Dilution info	9.66 µg/mL
Notes	-

Target data

See full target information CD9

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).

Storage

Shipped at conditions	Blue Ice
Appropriate short-term storage duration	1-2 weeks
Appropriate short-term storage conditions	+4°C

Appropriate long-term storage conditions	-20°C
Aliquoting information	Upon delivery aliquot
Storage information	Avoid freeze / thaw cycle

Notes

What are the advantages of a recombinant monoclonal antibody?
This product is a recombinant monoclonal antibody, which offers several advantages including:

- High batch-to-batch consistency and reproducibility
- Improved sensitivity and specificity
- Long-term security of supply
- Animal-free batch production

For more information, read more on recombinant antibodies.

Want a custom formulation?
This antibody clone is manufactured by Abcam. If you require a custom buffer formulation or conjugation for your experiments, please contact orders@abcam.com

Supplementary info

This supplementary information is collated from multiple sources and compiled automatically.

Activity summary	CD9 also known as motility-related protein-1 (MRP-1) is a transmembrane glycoprotein with a molecular weight of approximately 24 kDa. This protein is part of the tetraspanin family and shows widespread expression throughout different tissues including hematopoietic and non-hematopoietic cells. CD9 participates in numerous cellular processes by interacting with integrins and other cell surface receptors facilitating the organization of molecular complexes within the cell membrane.
Biological function summary	The CD9 protein is integral to cell adhesion migration and fusion. It forms complexes with other tetraspanins and proteins like EWI-2 and EWI-F contributing to cellular signaling and membrane compartmentalization. Additionally CD9 plays an important role in the formation and secretion of exosomes tiny vesicles emitted by cells that mediate cell-to-cell communication. These exosomes can be analyzed using tools like exosome assays and detection kits that target CD9 proteins.
Pathways	CD9 is involved in the regulation of immune response and cell morphology. It participates in pathways such as the integrin signaling pathway and the phosphatidylinositol 3-kinase (PI3K) signaling pathway. CD9 modulates these interactions by associating with proteins such as integrins and other members of the tetraspanin family influencing cellular movement and proliferation.

Associated diseases and disorders	CD9 has connections to various conditions including cancer and infectious diseases. In cancer CD9 can influence tumor progression and metastasis while its altered expression levels have been associated with different cancer types. CD9 interacts with proteins such as integrins and CD81 in these contexts affecting cellular adhesion and migration mechanisms. In infectious diseases CD9 is involved in viral entry processes as some viruses utilize CD9 and its associated tetraspanins for entry into host cells.

Product promise

Tested

We have tested this species and application combination and it works. It is covered by our product promise.

Expected

We have not tested this specific species and application combination in-house, but expect it will work. It is covered by our product promise.

Predicted

This species and application combination has not been tested, but we predict it will work based on strong homology. However, this combination is not covered by our product promise.

Not recommended

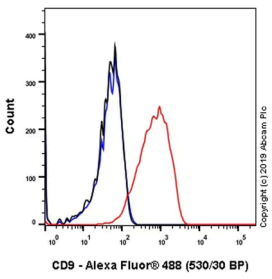
We do not recommend this combination. It is not covered by our product promise.

We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

In the unlikely event of one of our products not working as expected, you are covered by our product promise.

Full details and terms and conditions can be found here:
Terms & Conditions.

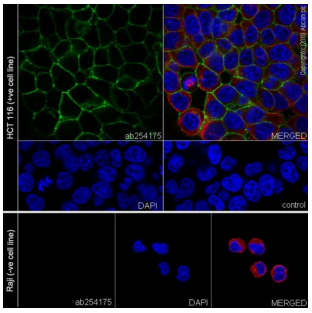
2 product images



Flow Cytometry - Anti-CD9 antibody [P1/33/2] (ab254175)

CD9 Flow Cytometry staining using mouse Anti-CD9 antibody

Flow cytometric analysis of HCT 116 (Human colorectal carcinoma epithelial cell) cells labeling CD9 with ab254175 at 1.006µg/ml (Red) compared with a mouse Isotype control (Black) and an unlabeled control (cells without incubation with primary antibody and secondary antibody) (Blue). Goat anti mouse IgG (Alexa Fluor® 488, ab150113), at 1/2000 dilution was used as the secondary antibody. Gated on viable cells.



Immunocytochemistry/ Immunofluorescence - Anti-CD9 antibody [P1/33/2] (ab254175)

CD9 Immunocytochemistry/ Immunofluorescence staining using mouse Anti-CD9 antibody

Immunofluorescent analysis of 4% paraformaldehyde-fixed, 0.1% Triton X-100 permeabilized HCT 116 (human colorectal carcinoma epithelial cell) cells labeling CD9 with ab254175 at 9.66µg/ml, followed by ab150113 AlexaFluor®488 Goat anti-Mouse secondary antibody at 1/1000 dilution (Green). Confocal image showing membranous staining in HCT 116 cells. The nuclear counterstain is DAPI (Blue). Tubulin is detected with ab179504 anti-beta IV Tubulin antibody - Microtubule Marker at 1/200 dilution, followed by ab150080 AlexaFluor®594 Goat anti-Rabbit secondary antibody (Red).
Control: Used PBS instead of primary antibody, followed by ab150113 AlexaFluor®488 Goat anti-Mouse secondary antibody at 1/1000 dilution.

Negative control: Raji (PMID: 8921952).

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.