abcam

ab267502

Alexa Fluor® 488 Anti-CD9 antibody [EPR23105-121]

Recombinant | RabMAb

Key facts

Isotype	IgG
Host species	Rabbit
Conjugation	Alexa Fluor® 488
Excitation/Emission	Ex: 495nm, Em: 519nm
Storage buffer	pH: 7.4 Preservative: 0.02% Sodium azide Constituents: PBS, 30% Glycerol (glycerin, glycerine), 1% BSA
Form	Liquid
Clonality	Monoclonal
Immunogen	The exact immunogen used to generate this antibody is proprietary information.
Clone number	EPR23105-121
Purification technique	Affinity purification Protein A
Concentration	0.5 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

ICC

Tested

Species	Human
Dilution info	1/100
Notes	This product gave a positive signal in HCT116 fixed with 4% formaldehyde (10 min) and 100% methanol (5 min).

Flow Cyt

Tested

Species	Human
Dilution info	1/2500
Notes	-

ICC/IF

Expected

Species	Human
Dilution info	Use at an assay dependent concentration.
Notes	-

IHC-P

Expected

Species	Human
Dilution info	Use at an assay dependent concentration.
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, Store in the dark

Notes

Patented technology
Our RabMAb® technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to RabMAb® patents.

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.

Alexa Fluor® is a registered trademark of Molecular Probes, Inc, a Thermo Fisher Scientific Company. The Alexa Fluor® dye included in this product is provided under an intellectual property license from Life Technologies Corporation. As this product contains the Alexa Fluor® dye, the purchase of this product conveys to the buyer the non-transferable right to use the purchased product and components of the product only in research conducted by the buyer (whether the buyer is an academic or for-profit entity). As this product contains the Alexa Fluor® dye the sale of this product is expressly conditioned on the buyer not using the product or its components, or any materials made using the product or its components, in any activity to generate revenue, which may include, but is not limited

to use of the product or its components: in manufacturing; (ii) to provide a service, information, or data in return for payment (iii) for therapeutic, diagnostic or prophylactic purposes; or (iv) for resale, regardless of whether they are sold for use in research. For information on purchasing a license to this product for purposes other than research, contact Life Technologies Corporation, 5781 Van Allen Way, Carlsbad, CA 92008 USA or outlicensing@thermofisher.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.

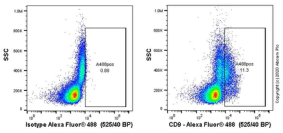
We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

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.

---

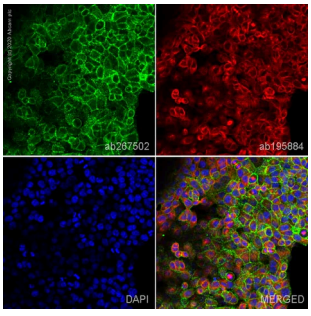
2 product images



Flow Cytometry - Alexa Fluor® 488 Anti-CD9 antibody [EPR23105-121] (ab267502)

CD9 Flow Cytometry staining using rabbit Anti-CD9 antibody

Flow cytometry staining of human peripheral blood mononuclear cells (PBMCs) with ab267502 (right) or Rabbit IgG (monoclonal) Alexa Fluor® 488 (ab199091) isotype (left). PBMCs were incubated for 30 min on ice in 1x PBS containing 10µg/mL human IgG and 10% normal goat serum to block FC receptors and non-specific protein-protein interaction followed by the antibody (ab267502) or Rabbit IgG (monoclonal) Alexa Fluor® 488 (ab199091) isotype (1x 10^6 in 100µL at 0.2 µg/mL (1/2500)) for 30 min on ice.
Acquisition of >30000 events were collected using a 50 mW Blue laser (488nm) and 525/40 bandpass filter. Events were gated on live single cells.



Immunocytochemistry - Alexa Fluor® 488 Anti-CD9 antibody [EPR23105-121] (ab267502)

CD9 Immunocytochemistry staining using rabbit Anti-CD9 antibody

Immunofluorescence staining of CD9 in HCT116 cells using ab267502. The cells were fixed with 4% formaldehyde (10 min), permeabilized with 0.1% Triton X-100 for 5 minutes and then blocked with 1% BSA/10% normal goat serum/0.3M glycine in 0.1% PBS-Tween for 1h. The cells were then incubated overnight at +4°C with ab267502 at 1/100 dilution (shown in green) and ab195884, Rat monoclonal to Tubulin (Alexa Fluor® 647), at 1/250 dilution (shown in red). Nuclear DNA was labelled with DAPI (shown in blue).
Image was taken with a confocal microscope (Leica-Microsystems, TCS SP8).

This product also gave a positive signal under the same testing conditions in HCT116 cells fixed with 100% methanol (5 min).

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