abcam

ab253088

APC Anti-CD49b antibody [HMa2]

Anti-CD49b antibody [HMa2] conjugated to APC - suitable for flow cytometry, and reacts with mouse samples. Clone [HMa2] is a Armenian Hamster monoclonal antibody cited in 3 publications.

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Key facts

Isotype	IgG
Host species	Armenian hamster
Conjugation	APC
Excitation/Emission	Ex: 650nm, Em: 660nm
Storage buffer	pH: 7.2 Preservative: 0.09% Sodium azide Constituents: 0.87% Sodium chloride, 0.16% Sodium phosphate, 0.1% Gelatin
Form	Liquid
Clonality	Monoclonal
Clone number	HMa2
Purification technique	Affinity purification
Concentration	0.2 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →
Purification notes	Purified from Tissue culture supernatant.

Reactivity data

Flow Cyt

Tested

Species	Mouse
Dilution info	-
Notes	Use at 0.125 µg per reaction.

Target data

See full target information Itga2

Function	Integrin alpha-2/beta-1 is a collagen receptor, being responsible for adhesion of platelets and other cells to collagens, modulation of collagen and collagenase gene expression, force generation and organization of newly synthesized extracellular matrix. It is also a receptor for laminins, collagen C-propeptides and E-cadherin. Mice homozygous for a null mutation in the alpha-2 die very early in embryogenesis.

Storage

Shipped at conditions	Blue Ice
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	+4°C
Storage information	Store in the dark

Supplementary info

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

Activity summary	CD49b also known as Integrin alpha-2 or ITGA2 is a transmembrane glycoprotein with a molecular weight of approximately 160 kDa. This protein localizes on the surface of various cells including platelets fibroblasts and some immune cells. It functions as part of the integrin family which are receptors that mediate the cell-extracellular matrix (ECM) interactions. CD49b binds to collagen and laminin in the ECM and contributes to cellular adhesion and signal transduction.
Biological function summary	The CD49b protein plays a critical role in cell migration thrombosis and wound healing. By forming a heterodimer with Integrin beta-1 it becomes a part of the collagen receptor complex Integrin alpha-2/beta-1 which facilitates various cellular interactions with the ECM. This functionality enables cells to sense their environment and respond to mechanical changes which is important for processes such as tissue repair and embryonic development.

Pathways	Several cellular mechanisms involve CD49b in maintaining physiological homeostasis. One significant pathway is the integrin signaling pathway where CD49b interacts with focal adhesion kinase (FAK) and other intracellular proteins to regulate cytoskeletal rearrangement and cell motility. Another pathway is platelet activation where CD49b collaborates with glycoprotein VI (GPVI) and other receptors to initiate platelet aggregation during hemostasis. These pathways highlight the importance of CD49b in various cellular functions related to cell mobility and stability.
Associated diseases and disorders	Researchers have linked CD49b to conditions including thrombosis and fibrosis. In thrombosis abnormal platelet aggregation often involves CD49b and its interaction with fibrinogen and von Willebrand factor. In fibrosis CD49b's role in cell adhesion and matrix remodeling correlates with excessive ECM deposition and scar formation. Understanding CD49b's function offers insights into therapeutic strategies alongside related proteins such as Integrin beta-1 which may modulate disease progression.

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

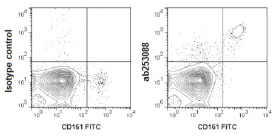
We do not recommend this combination. It is not covered by our product promise.

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1 product image



Flow Cytometry - APC Anti-CD49b antibody [HMa2] (ab253088)

CD49b Flow Cytometry staining using armenian hamster Anti-CD49b antibody

Flow cytometric analysis of C57BI/6 splenocytes stained for CD49b using ab253088 at 0.125 µg (right panel) compared to 0.125 µg APC Armenian Hamster IgG isotype control (left panel).

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