abcam

ab41460

APC Anti-Integrin alpha 2 antibody [DX5]

Anti-Integrin alpha 2 antibody [DX5] conjugated to APC - suitable for flow cytometry, and reacts with mouse samples. Clone [DX5] is a rat monoclonal antibody and one of the most commonly used clones for flow cytometry.

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Key facts

Isotype	IgM
Host species	Rat
Conjugation	APC
Excitation/Emission	Ex: 650nm, Em: 660nm
Storage buffer	pH: 7.3 Preservative: 0.09% Sodium azide Constituents: PBS, 16% Sucrose
Form	Liquid
Clonality	Monoclonal
Immunogen	Cell preparation containing Itga2 protein. The exact immunogen used to generate this antibody is proprietary information. Database link Q62469
Clone number	DX5
Purity	IgM fraction
Light chain type	kappa
Concentration	0.1 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

Flow Cyt

Tested

Species	Mouse
Dilution info	-
Notes	-

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

Notes

This monoclonal antibody, clone DX5, reacts with CD49b, also known as very late antigen-2 (VLA-2) and Integrin alpha 2. The antibody stains the majority of NK cells and a small subpopulation of T cells in all mouse strains tested (e.g., A/J, AKR, BALB/c, C3H/HeJ, C57BL/6, C57BL/10, C57BR, C58, CBA/Ca, CBA/J, DBA/1, DBA/2, SJL, SWR). Three-color flow cytometry analysis has revealed that most cells that express NK-1.1 (NKR-P1C) also express CD49b. However, small subsets of DX5+NK-1.1- and DX5-NK-1.1+ cells can be found, especially among the CD3+ population of T lymphocytes.2 NK cells cultured in the presence of IL-2 progressively lose reactivity with DX5 as a consequence of cellular proliferation. Therefore, DX5 can be used to define functionally distinct subsets of murine NK cells. The monoclonal antibody DX5 has not been demonstrated to have activating or blocking activity.

Supplementary info

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

Activity summary	Integrin alpha 2 also known as CD49b ITGA2 and A2 is a protein that functions as part of the integrin family. Integrins are transmembrane receptors that facilitate cell-extracellular matrix adhesion. Integrin alpha 2 has a molecular mass of approximately 130 kDa and is widely expressed in epithelial cells fibroblasts and platelets. This protein is important for mediating adhesion between cells and the extracellular matrix affecting cell signaling and behavior. Through this adhesion cells can communicate with their environment adjusting their functions accordingly.
Biological function summary	Integrin alpha 2 plays a significant role in cellular processes like migration and proliferation. It forms a heterodimer complex by pairing with the beta 1-integrin subunit contributing to its adhesive and signaling functions. This association enables the integrin alpha 2 complex to bind specific extracellular matrix components such as collagen and laminin. Through these interactions it regulates processes like wound healing and tissue remodeling and affects how cells respond to mechanical stress.
Pathways	Integrin alpha 2 is involved in major signaling routes that influence cell fate and movement. Notably it participates in the PI3K/AKT and MAPK pathways which are important for regulating cell growth and survival. It interacts with signaling proteins like focal adhesion kinase (FAK) and Src family kinases linking extracellular matrix changes to intracellular responses. These pathways help in transmitting signals that coordinate the cell's structural and functional adjustments in response to its surroundings.
Associated diseases and disorders	Integrin alpha 2 has connections to cancer and fibrosis. In cancers its altered expression may contribute to tumor progression and metastasis often involving interactions with other integrins and matrix metalloproteinases that degrade extracellular components. In fibrosis excessive integrin alpha 2 activity can lead to abnormal tissue remodeling and scarring implicating its role alongside collagen-producing cells. Understanding these connections is vital for developing therapies targeting integrin-mediated pathways in these diseases.

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

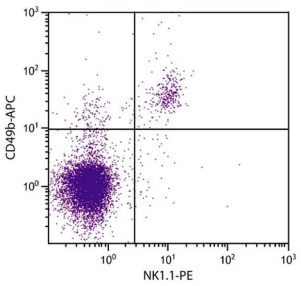
We do not recommend this combination. It is not covered by our product promise.

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.

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1 product image



Flow Cytometry - APC Anti-Integrin alpha 2 antibody [DX5] (ab41460)

Integrin alpha 2 Flow Cytometry staining using rat Anti-Integrin alpha 2 antibody

Flow Cytometry analysis of C57BL/6 mouse splenocytes stained for Integrin alpha 2 using ab41460 (0.1 µg/10^6 cells) and a Mouse Anti-Mouse NK1.1-PE.

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