abcam

ab25251

Anti-Integrin alpha 5 antibody [5H10-27 (MFR5)]

Key facts

Isotype	IgG2a
Host species	Rat
Storage buffer	pH: 8.2 Constituents: 100% Borate buffered saline
Form	Liquid
Clonality	Monoclonal
Immunogen	Cell preparation containing Integrin alpha-5 protein. The exact immunogen used to generate this antibody is proprietary information. Database link P11688
Clone number	5H10-27 (MFR5)
Specificity	ab25251 is specific for the alpha 5 subunit of the integrin alpha 5 beta 1 fibronectin receptor.
Light chain type	kappa
Concentration	0.5 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

Flow Cyt

Tested

Species	Mouse
Dilution info	-
Notes	Use up to 1ug/10^6 cells. ab18450 - Rat monoclonal IgG2a, is suitable for use as an isotype control with this antibody.

FuncS

Expected

Species	Mouse
Dilution info	-
Notes	T-cell co-stimulation, In vitro blocking of adhesion.

ICC/IF

Expected

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

IHC-Fr

Expected

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

Target data

See full target information Integrin alpha-5

Function Integrin alpha-5/beta-1 (ITGA5:ITGB1) is a receptor for fibronectin and fibrinogen (PubMed:36812915). It recognizes the sequence R-G-D in its ligands. ITGA5:ITGB1 binds to PLA2G2A via a site (site 2) which is distinct from the classical ligand-binding site (site 1) and this induces integrin conformational changes and enhanced ligand binding to site 1. ITGA5:ITGB1 acts as a receptor for fibrillin-1 (FBN1) and mediates R-G-D-dependent cell adhesion to FBN1. ITGA5:ITGB1 acts as a receptor for fibronectin (FN1) and mediates R-G-D-dependent cell adhesion to FN1 (By similarity). ITGA5:ITGB1 is a receptor for IL1B and binding is essential for IL1B signaling. ITGA5:ITGB3 is a receptor for soluble CD40LG and is required for CD40/CD40LG signaling (By similarity).

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

Soluble ab25251 inhibits VLA5-mediated functions in vitro. Immobilized ab25251 has also been demonstrated to co-stimulate the proliferative response of CD8+ T cells to plate-bound antiCD3 monoclonal antibody.

REACH authorisation
Abcam has not and does not intend to apply for the REACH Authorisation of customers' uses of products that contain European Authorisation list (Annex XIV) substances.
It is the responsibility of our customers to check the necessity of application of REACH Authorisation, and any other relevant authorisations, for their intended uses.

Supplementary info

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

Activity summary	Integrin alpha 5 also known as CD49e or ITGA5 is a subunit of the integrin family that forms heterodimers with beta 1 integrin. It has an approximate mass of 130 kDa. This protein mainly expresses in various tissues including fibroblasts endothelial cells and certain epithelial cells. Integrin alpha 5 mediates cell adhesion by binding to fibronectin an important extracellular matrix protein helping cells stay attached to their surrounding environment.
Biological function summary	Integrin alpha 5 plays a significant role in cellular processes such as migration proliferation and differentiation. It pairs with beta 1 integrin to form the alpha 5 beta 1 integrin complex. This complex facilitates the transmission of mechanical and chemical signals between the extracellular matrix and the cell interior. Integrin alpha 5 also interacts with intracellular proteins like talin and kindlin which are essential for initiating and strengthening the linkage to the actin cytoskeleton.
Pathways	Integrin alpha 5 is involved in the regulation of several critical signaling pathways. It prominently features within the MAPK/ERK pathway and the focal adhesion signaling pathway. Through these pathways integrin alpha 5 influences cell survival proliferation and migration. It interacts with proteins such as paxillin and

	focal adhesion kinase (FAK) within these pathways contributing to cellular responses to external stimuli.
Associated diseases and disorders	Integrin alpha 5 is linked to conditions such as cancer and fibrosis. Overexpression or aberrant regulation of this integrin often associates with tumorigenesis particularly in breast and colorectal cancers enhancing cancer cell migration and invasion. Integrin alpha 5 is also connected to proteins like matrix metalloproteinases (MMPs) which play roles in extracellular matrix remodeling and are involved in fibrotic diseases. These associations highlight the importance of integrin alpha 5 in pathological processes and its potential as a target for therapeutic intervention.

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

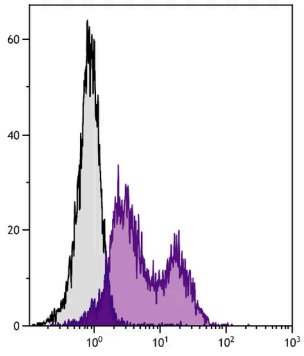
We do not recommend this combination. It is not covered by our product promise.

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.

1 product image



Flow Cytometry - Anti-Integrin alpha 5 antibody [5H10-27 (MFR5)] (ab25251)

Integrin alpha 5 Flow Cytometry staining of C57BL/6 mouse bone marrow cells using rat Anti-Integrin alpha 5 antibody

C57BL/6 mouse bone marrow cells were stained with Rat Anti-Mouse CD49e-UNLB followed by Goat Anti-Rat IgG(H+L), Mouse ads-PE. X⊠axis (horizontal): Fluorescence Intensity (PE). Y⊠axis (vertical): Cell Count. The grey peak is the isotype control (Rat IgG2a-UNLB) while the purple peak is the positive dataset.

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