abcam

ab106770

Anti-Integrin alpha 5 antibody [CB49e]

Key facts

Isotype	IgG1
Host species	Mouse
Storage buffer	pH: 7.4 Preservative: 0.1% Sodium azide Constituents: PBS, 0.5% BSA
Form	Liquid
Clonality	Monoclonal
Immunogen	Native Full Length Protein corresponding to Human ITGA5. Database link P08648
Clone number	CB49e
Purification technique	Affinity purification Protein G
Concentration	0.1 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

Flow Cyt

Expected

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

Target data

See full target information ITGA5

Function	Integrin alpha-5/beta-1 (ITGA5:ITGB1) is a receptor for fibronectin and fibrinogen. 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 (PubMed:18635536, PubMed:25398877). ITGA5:ITGB1 acts as a receptor for fibrillin-1 (FBN1) and mediates R-G-D-dependent cell adhesion to FBN1 (PubMed:12807887, PubMed:17158881). ITGA5:ITGB1 acts as a receptor for fibronectin (FN1) and mediates R-G-D-dependent cell adhesion to FN1 (PubMed:33962943). ITGA5:ITGB1 is a receptor for IL1B and binding is essential for IL1B signaling (PubMed:29030430). ITGA5:ITGB3 is a receptor for soluble CD40LG and is required for CD40/CD40LG signaling (PubMed:31331973). (Microbial infection) Integrin ITGA5:ITGB1 acts as a receptor for Human metapneumovirus. (Microbial infection) Integrin ITGA2:ITGB1 acts as a receptor for Human parvovirus B19. (Microbial infection) In case of HIV-1 infection, the interaction with extracellular viral Tat protein seems to enhance angiogenesis in Kaposi's sarcoma lesions.

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
Storage information	Avoid freeze / thaw cycle, It is important to note that this product is reported to be light sensitive, Store in the dark

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.

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

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