abcam

ab97588

Anti-Integrin alpha V + beta 6 antibody [avB6 53a.2]

Anti-Integrin alpha V + beta 6 antibody [avB6 53a.2] (ab97588) is a rat monoclonal antibody detecting Integrin alpha V + beta 6 in **Flow Cytometry, ICC/IF, Neut**. Suitable for **Human**.

- Trusted since 2010

Key facts

Isotype	IgG2a
Host species	Rat
Storage buffer	Preservative: 0.02% Sodium azide Constituents: PBS
Form	Liquid
Clonality	Monoclonal
Immunogen	Full Length Protein corresponding to Human ITGAV. The exact immunogen used to generate this antibody is proprietary information. Database link P06756
Clone number	avB6 53a.2
Purification technique	Affinity purification Protein A/G
Epitope	Extracelllular region of the heterodimer.
Concentration	1 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

Flow Cyt

Expected

Species	Human
Dilution info	-
Notes	ab18450 - Rat monoclonal IgG2a, is suitable for use as an isotype control with this antibody.

FuncS (Neut/Block)

Expected

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

ICC/IF

Expected

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

Target data

See full target information ITGAV

Function

The alpha-V (ITGAV) integrins are receptors for vitronectin, cytotactin, fibronectin, fibrinogen, laminin, matrix metalloproteinase-2, osteopontin, osteomodulin, prothrombin, thrombospondin and vWF. They recognize the sequence R-G-D in a wide array of ligands. ITGAV:ITGB3 binds to fractalkine (CX3CL1) and may act as its coreceptor in CX3CR1-dependent fractalkine signaling (PubMed:23125415). ITGAV:ITGB3 binds to NRG1 (via EGF domain) and this binding is essential for NRG1-ERBB signaling (PubMed:20682778). ITGAV:ITGB3 binds to FGF1 and this binding is essential for FGF1 signaling (PubMed:18441324). ITGAV:ITGB3 binds to FGF2 and this binding is essential for FGF2 signaling (PubMed:28302677). ITGAV:ITGB3 binds to IGF1 and this binding is essential for IGF1 signaling (PubMed:19578119). ITGAV:ITGB3 binds to IGF2 and this binding is essential for IGF2 signaling (PubMed:28873464). ITGAV:ITGB3 binds to IL1B and this binding is essential for IL1B signaling (PubMed:29030430). ITGAV:ITGB3 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). ITGAV:ITGB3 and ITGAV:ITGB6 act as receptors for fibrillin-1 (FBN1) and mediate R-G-D-dependent cell adhesion to FBN1 (PubMed:12807887, PubMed:17158881). Integrin alpha-V/beta-6 or alpha-V/beta-8

(ITGAV:ITGB6 or ITGAV:ITGB8) mediates R-G-D-dependent release of transforming growth factor beta-1 (TGF-beta-1) from regulatory Latency-associated peptide (LAP), thereby playing a key role in TGF-beta-1 activation (PubMed:15184403, PubMed:22278742, PubMed:28117447). ITGAV:ITGB3 acts as a receptor for CD40LG (PubMed:31331973). ITGAV:ITGB3 acts as a receptor for IBSP and promotes cell adhesion and migration to IBSP (PubMed:10640428). (Microbial infection) Integrin ITGAV:ITGB5 acts as a receptor for Adenovirus type C. (Microbial infection) Integrin ITGAV:ITGB5 and ITGAV:ITGB3 act as receptors for Coxsackievirus A9 and B1. (Microbial infection) Integrin ITGAV:ITGB3 acts as a receptor for Herpes virus 8/HHV-8. (Microbial infection) Integrin ITGAV:ITGB6 acts as a receptor for herpes simplex 1/HHV-1. (Microbial infection) Integrin ITGAV:ITGB3 acts as a receptor for Human parechovirus 1. (Microbial infection) Integrin ITGAV:ITGB3 acts as a receptor for West nile virus. (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 conditions	+4°C
Appropriate long-term storage conditions	-20°C
Aliquoting information	Upon delivery aliquot
Storage information	Avoid freeze / thaw cycle

Notes

What is this antibody validated in?
Anti-Integrin alpha V + beta 6 antibody [avB6 53a.2] (ab97588) is a rat monoclonal antibody and is validated for use in Flow Cytometry (Flow Cyt), Immunocytochemistry/immunofluorescence (ICC/IF), Neutralising in Human samples.

Supplementary info

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

Activity summary	Integrin αvB6 also known as integrin alpha V beta 6 or integrin avb6 is a protein that plays a significant role in cellular adhesion and signaling. This heterodimeric complex consists of alpha V and beta 6 subunits with a molecular weight around 150 kDa. Integrin αvB6 is primarily expressed in epithelial cells and remains largely absent in normal tissues but becomes upregulated in activated or injured epithelial tissues. Due to its limited expression under normal conditions integrin

	αvB6 presents a notable interest for research in tissue repair and related processes.
Biological function summary	Integrin αvB6 engages in binding with specific ligands such as fibronectin vitronectin and latency-associated peptides. This protein forms a part of a larger integrin family existing as a heterodimer playing an important role in the activation of transforming growth factor-beta (TGF-B). The interaction between integrin αvB6 and its ligands contributes to cell proliferation migration differentiation and modulation of the local cellular environment affecting tissue remodeling and immunity.
Pathways	Integrin αvB6 is involved in TGF-B signaling and the epithelial-mesenchymal transition (EMT) pathway. These pathways are fundamental for regulating developmental processes and tissue repair providing cues for cell fate and homeostasis. Additionally integrin αvB6 associates with other proteins including fibronectin and vitronectin enhancing its role in mediating cell-extracellular matrix interactions which supports cellular communication and migration essential for these pathways.
Associated diseases and disorders	Integrin αvB6 has been implicated in conditions like fibrosis and cancer. Its involvement in promoting EMT and activating TGF-B connects it closely with fibrotic diseases such as idiopathic pulmonary fibrosis where tissue scarring results from excessive collagen deposition. Regarding cancer integrin αvB6 expression is often increased in tumors and contributes to tumor progression and metastasis particularly in pancreatic cancer. Integrin αvB6 often collaborates with proteins like TGF-B which actively participate in pathways facilitating these disease processes.

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

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