abcam

ab16821

Anti-Integrin alpha V antibody [272-17E6] - BSA and Azide free

Key facts

Isotype	IgG1
Host species	Mouse
Storage buffer	Constituents: PBS
Form	Liquid
Clonality	Monoclonal
Immunogen	Native Full Length Protein corresponding to Human ITGAV. Database link P06756
Carrier free	Yes
Clone number	272-17E6
Purification technique	Affinity purification Protein G
Specificity	Cross reacts with all alpha V integrins.
Light chain type	kappa
Concentration	1 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	-
Notes	ab170190 - Mouse monoclonal IgG1, is suitable for use as an isotype control with this antibody.

Not recommended

Species	Mouse
Dilution info	-
Notes	ab170190 - Mouse monoclonal IgG1, is suitable for use as an isotype control with this antibody.

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

This product was changed from ascites to tissue culture supernatant on 17 May 2019. Please note that the dilutions may need to be adjusted accordingly. If you have any questions, please do not hesitate to contact our scientific support team.

Supplementary info

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

Activity summary	Integrin alpha V also known as integrin av CD51 and CD51/CD61 is a transmembrane protein with an approximate mass of 125 kDa. It functions mechanically by mediating cell adhesion and signaling through its interaction with the extracellular matrix and other cells. Integrin alpha V is widely expressed in a variety of tissues including endothelial and epithelial cells as well as some tumor cells. This protein forms heterodimers typically with beta subunits like CD61 which is also referred to as beta 3 integrin to execute its biological functions.
Biological function summary	Integrin alpha V plays a pivotal role in cellular processes such as migration proliferation and survival. It participates in the formation of multi-molecular complexes within cellular structures. The integrin av integrins particularly in conjunction with its CD51/CD61 form contribute to the regulation of angiogenesis immune response and wound healing. These functions arise from the integrin’s ability to act as a receptor for numerous ligands including fibrinogen fibronectin and vitronectin.
Pathways	Integrin alpha V is a critical component of the integrin signaling and focal adhesion pathways. These pathways involve a network of interactions that include proteins like focal adhesion kinase (FAK) and Src family kinases. Integrin alpha V’s interaction within these pathways assists in transmitting mechanical signals from the extracellular environment to the intracellular signaling cascades affecting

	cytoskeleton dynamics and gene expression. The pathway interactions with integrin av also coordinate complex signaling with other receptors and matrix proteins like laminins enhancing cellular communication and response to environmental changes.
Associated diseases and disorders	Integrin alpha V's dysregulation associates with conditions such as cancer and fibrosis. Overexpression or aberrant functioning of integrin av contributes to tumor progression and metastasis by promoting angiogenesis and cell migration. In fibrotic diseases the protein's interactions with the extracellular matrix components are altered leading to excessive tissue scarring and dysfunction. Furthermore integrin alpha V interplays with proteins such as matrix metalloproteinases (MMPs) in the tumor microenvironment facilitating tissue remodeling and cancer cell invasion.

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

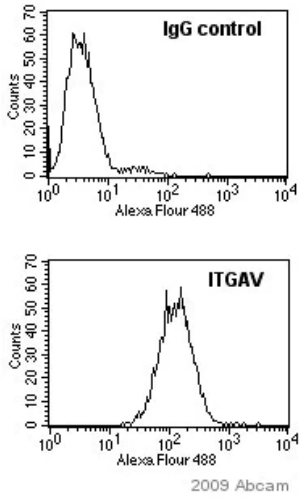
We do not recommend this combination. It is not covered by our product promise.

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.

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2 product images

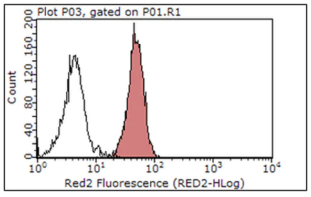


This image is a courtesy of Anonymous customer review

Flow Cytometry (Intracellular) - Anti-Integrin alpha V antibody [272-17E6] - BSA and Azide free (ab16821)

Integrin alpha V Flow Cytometry (Intracellular) staining using mouse Anti-Integrin alpha V antibody

ab16821 staining Integrin alpha V in Human melanoma cells by intacellular Flow Cytometery. Samples were prepared by trypsinizing cells, treatment with STI and spun out trypsin, kept on ice during experiment duration. FSC and SSC were used to gate healthy cell population, which excluded PI positive cells. The primary antibody was diluted 1/250 and incubated with sample for 1 hour at 4°C in 2% FCS/0. 1%NaAzide/PBS. An Alexa Fuor® 488-conjugated Goat polyclonal to mouse IgG was used at dilution at 1/500 as secondary antibody.
This image was generated using the ascites version of the product.



Flow Cytometry (Intracellular) - Anti-Integrin alpha V antibody [272-17E6] - BSA and Azide free (ab16821)

Integrin alpha V Flow Cytometry (Intracellular) staining using mouse Anti-Integrin alpha V antibody

Intracellular Flow Cytometry analysis of HeLa cells labeling Integrin alpha V with ab16821 at 0.5 µg (red), or with 1 µg of Mouse IgG isotype control.

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