Product datasheet

Anti-Integrin alpha V beta 3 antibody [LM609] ab190147

Overview

Product name | Anti-Integrin alpha V beta 3 antibody [LM609]
Description | Mouse monoclonal [LM609] to Integrin alpha V beta 3
Host species | Mouse
Tested applications | Suitable for: Flow Cyt, ICC/IF
Species reactivity | Reacts with: Human
Immunogen | Full length protein corresponding to Integrin alpha V beta 3.
General notes | This antibody clone is manufactured by Abcam.
If you require this antibody in a particular buffer formulation or a particular conjugate for your experiments, please contact orders@abcam.com or you can find further information here.

Properties

Form | Liquid
Storage instructions | Shipped at 4°C. Store at +4°C short term (1-2 weeks). Store at -20°C long term.
Storage buffer | pH: 7.40
Preservative: 0.02% Sodium azide
Constituents: PBS, 6.97% L-Arginine
Purity | Protein G purified
Clonality | Monoclonal
Clone number | LM609
Isotype | IgG1

Applications

Our Abpromise guarantee covers the use of ab190147 in the following tested applications.
The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.
Relevance

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 IGF1 and this binding is essential for IGF1 signaling (PubMed:19578119). 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 a receptor for fibrillin-1 (FBN1) and mediate R-G-D-dependent cell adhesion to FBN1 (PubMed:12807887, PubMed:17158881).


Cellular localization


Images
Overlay histogram showing HUVEC cells stained with ab190147 (red line). The cells were incubated in 1x PBS containing 10 % normal goat serum to block non-specific protein-protein interaction followed by the antibody (ab190147) (1 µg/1x10^6 cells) for 30 min on ice. The secondary antibody Goat anti-mouse IgG H&L (Alexa Fluor® 488, pre-adsorbed) (ab150117) was used at 1/2000 for 30 min on ice.

Isotype control antibody (black line) was mouse IgG1κ (ab170190) used at the same concentration and conditions as the primary antibody. Unlabelled sample (blue line) was also used as a control.

Acquisition of >5,000 events were collected using a 50 mW Blue laser (488nm) and 525/40 bandpass filter.

Overlay histogram showing HUVEC (Human umbilical vein endothelial cell line) cells stained with ab190147 (red line). The cells were fixed with 4% formaldehyde (10 minutes) and incubated in 1x PBS / 10% normal goat serum / 0.3M glycine to block non-specific protein-protein interactions. The cells were then incubated with the antibody (ab190147, 1 µg/1x10^6 cells) for 30 minutes at 22ºC. The secondary antibody used was Alexa Fluor® 488 goat anti-mouse IgG (H+L) (ab150113) at 1/4000 dilution for 30 minutes at 22ºC. Isotype control antibody (black line) was mouse IgG1 [ICIGG1] (ab19353, 1 µg/1x10^6 cells) used under the same conditions.

Acquisition of >5,000 events were collected using a 20mW Argon ion laser (488nm) and 525/30 bandpass filter.

ab190147 stained Malme-3M cells. The cells were 4% formaldehyde fixed for 10 minutes at room temperature and then incubated in 1% BSA / 10% normal goat serum / 0.3M glycine in 0.1% PBS-Tween for 1 hour at room temperature to permeabilize the cells and block non-specific protein-protein interactions. The cells were then incubated with the antibody (ab190147 at 5 µg/ml) overnight at +4ºC. The secondary antibody (pseudo-colored green) was Goat Anti-Mouse IgG H&L (Alexa Fluor® 488) preadsorbed (ab150117) used at a 1/1000 dilution for 1 hour at room temperature. Alexa Fluor® 594 WGA was used to label plasma membranes (pseudo-colored red) at a 1/200 dilution for 1 hour at room temperature. DAPI was used to stain the cell nuclei (pseudo-colored blue) at a concentration of 1.43 µM for 1 hour at room temperature.
Please note: All products are “FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES”

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