SANTA CRUZ BIOTECHNOLOGY, INC.

Integrin αV (H-2): sc-376156

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Integrins are heterodimers composed of noncovalently associated transmembrane α and β subunits. The 16 α and 8 β subunits heterodimerize to produce more than 20 different receptors. Most integrin receptors bind ligands that are components of the extracellular matrix, including Fibronectin, collagen and Vitronectin. Certain integrins can also bind to soluble ligands such as fibrinogen, or to counterreceptors on adjacent cells such as the intracellular adhesion molecules (ICAMs), leading to aggregation of cells. Ligands serve to cross-link or cluster integrins by binding to adjacent integrin receptors; both receptor clustering and ligand occupancy are necessary for the activation of integrin-mediated responses. In addition to mediating cell adhesion and cytoskeletal organization, integrins function as signaling receptors. Signals transduced by integrins play a role in many biological processes, including cell growth, differentiation, migration and apoptosis.

REFERENCES

1. Horton, M.A., et al. 1985. Monoclonal antibodies to osteoclastomas (giant cell bone tumors): definition of osteoclast-specific cellular antigens. Cancer Res. 45: 5663-5669.
2. Hynes, R.O. 1992. Integrins: versatility, modulation and signaling in cell adhesion. Cell 69: 11-25.

CHROMOSOMAL LOCATION

Genetic locus: ITGAV (human) mapping to 2q32.1; Itgav (mouse) mapping to 2 D.

SOURCE

Integrin αV (H-2) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 859-888 at the C-terminus of Integrin αV of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Integrin αV (H-2) is available conjugated to agarose (sc-376156 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-376156 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-376156 PE), fluorescein (sc-376156 FITC), Alexa Fluor® 488 (sc-376156 AF488), Alexa Fluor® 546 (sc-376156 AF546), Alexa Fluor® 594 (sc-376156 AF594) or Alexa Fluor® 647 (sc-376156 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-376156 AF680) or Alexa Fluor® 790 (sc-376156 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-376156 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

APPLICATIONS

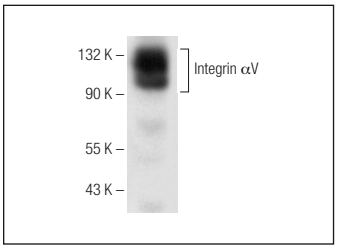
Integrin αV (H-2) is recommended for detection of Integrin αV heavy chain of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for Integrin αV siRNA (h): sc-29373, Integrin αV siRNA (m): sc-35694, Integrin αV shRNA Plasmid (h): sc-29373-SH, Integrin αV shRNA Plasmid (m): sc-35694-SH, Integrin αV shRNA (h) Lentiviral Particles: sc-29373-V and Integrin αV shRNA (m) Lentiviral Particles: sc-35694-V.

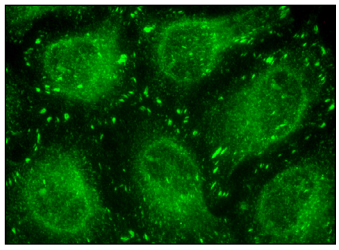
Molecular Weight of Integrin αV: 125-135 kDa.

Positive Controls: C32 whole cell lysate: sc-2205, RAW 264.7 whole cell lysate: sc-2211 or BT-20 cell lysate: sc-2223.

DATA



Integrin αV (H-2): sc-376156. Western blot analysis of Integrin αV expression in C32 whole cell lysate.



Integrin αV (H-2): sc-376156. Immunofluorescence staining of methanol-fixed HeLa cells showing showing membrane and focal adhesion site localization.

SELECT PRODUCT CITATIONS

1. Shen, Y., et al. 2013. Integrins-FAK-Rho GTPases pathway in endothelial cells sense and response to surface wettability of plasma nanocoatings. ACS Appl. Mater. Interfaces 5: 5112-5121.
2. Shidal, C., et al. 2017. The soy-derived peptide Lunasin inhibits invasive potential of melanoma initiating cells. Oncotarget 8: 25525-25541.
3. Yu, H., et al. 2018. Fluid shear stress regulates Hep G2 cell migration though time-dependent integrin signaling cascade. Cell Adh. Migr. 12: 56-68.
4. Ahat, E., et al. 2019. GRASP depletion-mediated Golgi destruction decreases cell adhesion and migration via the reduction of α5β1 Integrin. Mol. Biol. Cell 30: 766-777.
5. Barrionuevo, E., et al. 2020. A Penicillin derivative exerts an anti-metastatic activity in melanoma cells through the downregulation of Integrin $\alpha_v\beta_3$ and Wnt/β-catenin pathway. Front. Pharmacol. 11: 127.
6. Antoniades, I., et al. 2021. FAK displacement from focal adhesions: a promising strategy to target processes implicated in cancer progression and metastasis. Cell Commun. Signal. 19: 3.

RESEARCH USE

For research use only, not for use in diagnostic procedures.