

Integrin $\alpha 5$ (A-11): sc-166665

BACKGROUND

Integrins are heterodimers composed of noncovalently associated trans-membrane 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.

CHROMOSOMAL LOCATION

Genetic locus: ITGA5 (human) mapping to 12q13.13; Itga5 (mouse) mapping to 15 F3.

SOURCE

Integrin $\alpha 5$ (A-11) is a mouse monoclonal antibody raised against amino acids 840-943 of Integrin $\alpha 5$ of human origin.

PRODUCT

Each vial contains 200 μ g IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Integrin $\alpha 5$ (A-11) is available conjugated to agarose (sc-166665 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-166665 HRP), 200 μ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-166665 PE), fluorescein (sc-166665 FITC), Alexa Fluor® 488 (sc-166665 AF488), Alexa Fluor® 546 (sc-166665 AF546), Alexa Fluor® 594 (sc-166665 AF594) or Alexa Fluor® 647 (sc-166665 AF647), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-166665 AF680) or Alexa Fluor® 790 (sc-166665 AF790), 200 μ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

Integrin $\alpha 5$ (A-11) is recommended for detection of Integrin $\alpha 5$ of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (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 $\alpha 5$ siRNA (h): sc-29372, Integrin $\alpha 5$ siRNA (m): sc-35687, Integrin $\alpha 5$ shRNA Plasmid (h): sc-29372-SH, Integrin $\alpha 5$ shRNA Plasmid (m): sc-35687-SH, Integrin $\alpha 5$ shRNA (h) Lentiviral Particles: sc-29372-V and Integrin $\alpha 5$ shRNA (m) Lentiviral Particles: sc-35687-V.

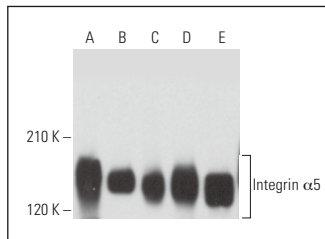
Molecular Weight of Integrin $\alpha 5$: 150 kDa.

Positive Controls: U-937 cell lysate: sc-2239 or A-10 cell lysate: sc-3806.

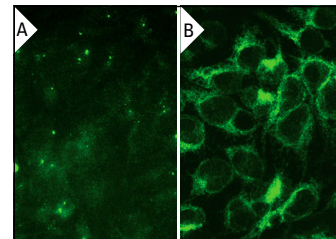
STORAGE

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

DATA



Integrin $\alpha 5$ (A-11): sc-166665. Western blot analysis of Integrin $\alpha 5$ expression in U-937 (A), HUV-EC-C (B), 3T3-L1 (C), RAW 264.7 (D) and A-10 (E) whole cell lysates.



Integrin $\alpha 5$ (A-11): sc-166665. Immunofluorescence staining of methanol-fixed untransfected (A) and human Integrin $\alpha 5$ transfected HEK 293T cells (B) lysates.

SELECT PRODUCT CITATIONS

- Shen, Y., et al. 2012. Surface wettability of plasma SiO₂/H nanocoating-induced endothelial cells' migration and the associated FAK-Rho GTPases signalling pathways. J. R. Soc. Interface 9: 313-327.
- Yu, H., et al. 2013. Interleukin-8 regulates endothelial permeability by down-regulation of tight junction but not dependent on integrins induced focal adhesions. Int. J. Biol. Sci. 9: 966-979.
- Shen, Y., et al. 2015. Effect of surface chemistry on the Integrin induced pathway in regulating vascular endothelial cells migration. Colloids Surf. B Biointerfaces 126: 188-197.
- Liu, S., et al. 2016. Fluid shear stress induces epithelial-mesenchymal transition (EMT) in Hep-2 cells. Oncotarget 7: 32876-32892.
- Yu, H., et al. 2018. Inhibition of cell migration by focal adhesion kinase: time-dependent difference in integrin-induced signaling between endothelial and hepatoblastoma cells. Int. J. Mol. Med. 41: 2573-2588.
- Nath, D., et al. 2019. Abi1 loss drives prostate tumorigenesis through activation of EMT and non-canonical Wnt signaling. Cell Commun. Signal. 17: 120.
- Mizushima, T., et al. 2020. Androgen receptor signaling reduces the efficacy of *Bacillus Calmette-Guérin* therapy for bladder cancer via modulating Rab27b-induced exocytosis. Mol. Cancer Ther. 19: 1930-1942.
- Castro-Córdova, P., et al. 2021. Entry of spores into intestinal epithelial cells contributes to recurrence of *Clostridioides difficile* infection. Nat. Commun. 12: 1140.
- Jimenez, L., et al. 2024. Extracellular vesicles from non-neuroendocrine SCLC cells promote adhesion and survival of neuroendocrine SCLC cells. Proteomics 24: e2300030.

RESEARCH USE

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

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