SANTA CRUZ BIOTECHNOLOGY, INC.

Integrin α6 (F-6): sc-374057

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.

CHROMOSOMAL LOCATION

Genetic locus: ITGA6 (human) mapping to 2q31.1; Itga6 (mouse) mapping to 2 C2.

SOURCE

Integrin α6 (F-6) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 24-50 at the N-terminus of Integrin α6 of human origin.

PRODUCT

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

Integrin α6 (F-6) is available conjugated to agarose (sc-374057 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-374057 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; and to either phycoerythrin (sc-374057 PE), fluorescein (sc-374057 FITC) or Alexa Fluor® 488 (sc-374057 AF488) or Alexa Fluor® 647 (sc-374057 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM.

Blocking peptide available for competition studies, sc-374057 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

APPLICATIONS

Integrin α6 (F-6) is recommended for detection of Integrin α6 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), 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).

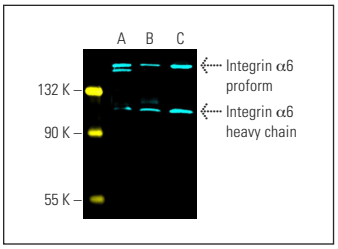
Suitable for use as control antibody for Integrin α6 siRNA (h): sc-43129, Integrin α6 siRNA (m): sc-43130, Integrin α6 shRNA Plasmid (h): sc-43129-SH, Integrin α6 shRNA Plasmid (m): sc-43130-SH, Integrin α6 shRNA (h) Lentiviral Particles: sc-43129-V and Integrin α6 shRNA (m) Lentiviral Particles: sc-43130-V.

Molecular Weight of Integrin α6 proform/heavy chain: 140/120 kDa.

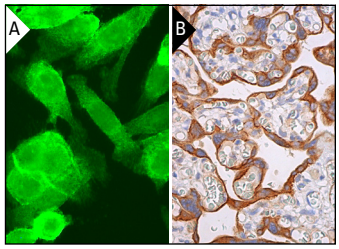
STORAGE

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

DATA



Integrin α6 (F-6) Alexa Fluor® 647: sc-374057 AF647. Direct fluorescent western blot analysis of Integrin α6 expression in HeLa (**A**), PC-3 (**B**) and Hep G2 (**C**) whole cell lysates. Blocked with UltraCruz® Blocking Reagent: sc-516214. Cruz Marker™ Molecular Weight Standards detected with Cruz Marker MW Tag-Alexa Fluor® 488: sc-516790.



Integrin α6 (F-6) Alexa Fluor® 488: sc-374057 AF488. Direct immunofluorescence staining of formalin-fixed SW480 cells showing membrane localization. Blocked with UltraCruz® Blocking Reagent: sc-516214 (**A**). Integrin α6 (F-6): sc-374057. Immunoperoxidase staining of formalin fixed, paraffin-embedded human placenta tissue showing membrane and cytoplasmic staining of trophoblastic cells (**B**).

SELECT PRODUCT CITATIONS

1. Frolikova, M., et al. 2016. Characterization of CD46 and β1 integrin dynamics during sperm acrosome reaction. Sci. Rep. 6: 33714.
2. Roberts, S.L., et al. 2017. Sox2 expression in Schwann cells inhibits myelination *in vivo* and induces influx of macrophages to the nerve. Development 144: 3114-3125.
3. Kim, Y.R., et al. 2018. Integrin α6 as an invasiveness marker for hepatitis B viral X-driven hepatocellular carcinoma. Cancer Biomark. 23: 135-144.
4. Frolikova, M., et al. 2019. Addressing the compartmentalization of specific integrin heterodimers in mouse sperm. Int. J. Mol. Sci. 20: 1004.
5. Jankovicova, J., et al. 2020. Expression and distribution of CD151 as a partner of α6 integrin in male germ cells. Sci. Rep. 10: 4374.
6. Armacki, M., et al. 2020. Protein kinase D1, reduced in human pancreatic tumors, increases secretion of small extracellular vesicles from cancer cells that promote metastasis to lung in mice. Gastroenterology 159: 1019-1035.e22.
7. Gao, B., et al. 2021. Identification of triptonide as a therapeutic agent for triple negative breast cancer treatment. Sci. Rep. 11: 2408.
8. Lin, Z., et al. 2021. Epidermal stem cells maintain stemness via a biomimetic micro/nanofiber scaffold that promotes wound healing by activating the Notch signaling pathway. Stem Cell Res. Ther. 12: 341.
9. Liu, H., et al. 2021. Promotion of bone lesions through the myeloma Integrin α6-mediated osteolytic signaling. Front. Oncol. 11: 692190.

RESEARCH USE

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