

Integrin $\alpha 5$ (P1D6): sc-13547

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: ITGA5 (human) mapping to 12q13.13.

SOURCE

Integrin $\alpha 5$ (P1D6) is a mouse monoclonal antibody raised against lymphokine activated killer cells of human origin.

PRODUCT

Each vial contains 200 μ g IgG₃ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Integrin $\alpha 5$ (P1D6) is available conjugated to either phycoerythrin (sc-13547 PE) or fluorescein (sc-13547 FITC), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM.

APPLICATIONS

Integrin $\alpha 5$ (P1D6) is recommended for detection of Integrin $\alpha 5$ of human and primate origin by Western Blotting (starting dilution 1:200, 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 flow cytometry (1 μ g per 1×10^6 cells).

Suitable for use as control antibody for Integrin $\alpha 5$ siRNA (h): sc-29372, Integrin $\alpha 5$ shRNA Plasmid (h): sc-29372-SH and Integrin $\alpha 5$ shRNA (h) Lentiviral Particles: sc-29372-V.

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

Positive Controls: HeLa whole cell lysate: sc-2200, HeLa + IL-6 cell lysate: sc-24687 or U-937 cell lysate: sc-2239.

RESEARCH USE

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

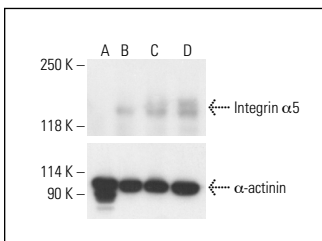
PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.

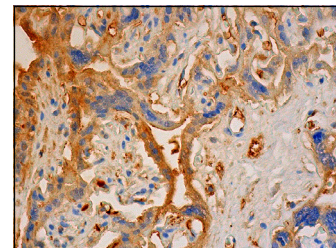
STORAGE

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

DATA



Integrin $\alpha 5$ (P1D6): sc-13547. Western blot analysis of Integrin $\alpha 5$ expression in untreated (A) and chemically-treated (B, C, D) A549 whole cell lysates. Detection reagent used: m-IgG₃ BP-HRP: sc-533670. α -actinin (H-2): sc-17829 used as loading control. Detection reagent used: m-IgG₁ BP-HRP: sc-525408.



Integrin $\alpha 5$ (P1D6): sc-13547. Immunoperoxidase staining of formalin fixed, paraffin-embedded human placenta tissue showing cytoplasmic and membrane staining of trophoblastic cells.

SELECT PRODUCT CITATIONS

- Brockbank, E.C., et al. 2005. Integrin $\beta 1$ is required for the invasive behaviour but not proliferation of squamous cell carcinoma cells *in vivo*. Br. J. Cancer 92: 102-112.
- Hooper, S., et al. 2010. A chemical biology screen reveals a role for Rab21-mediated control of actomyosin contractility in fibroblast-driven cancer invasion. Br. J. Cancer 102: 392-402.
- Sung, B.H., et al. 2011. Cortactin controls cell motility and lamellipodial dynamics by regulating ECM secretion. Curr. Biol. 21: 1460-1469.
- Brown, W.S., et al. 2014. B-Raf regulation of integrin $\alpha 4\beta 1$ -mediated resistance to shear stress through changes in cell spreading and cytoskeletal association in T cells. J. Biol. Chem. 289: 23141-23153.
- Hui, T., et al. 2015. Osteopontin binding to the $\alpha 4$ integrin requires highest affinity integrin conformation, but is independent of post-translational modifications of osteopontin. Matrix Biol. 41: 19-25.
- Hozumi, K., et al. 2016. Mixed Fibronectin-derived peptides conjugated to a chitosan matrix effectively promotes biological activities through integrins, $\alpha 4\beta 1$, $\alpha 5\beta 1$, $\alpha v\beta 3$, and syndecan. Biores. Open Access 5: 356-366.
- Moura, C.E.B., et al. 2019. Effect of plasma-nitrided titanium surfaces on the differentiation of pre-osteoblastic cells. Artif. Organs 43: 764-772.
- Scognamiglio, I., et al. 2022. Exosomal microRNAs synergistically trigger stromal fibroblasts in breast cancer. Mol. Ther. Nucleic Acids 28: 17-31.
- libushi, J., et al. 2024. ATG9B regulates bacterial internalization via Actin rearrangement. iScience 27: 109623.



See **Integrin $\alpha 5$ (C-9): sc-376199** for Integrin $\alpha 5$ antibody conjugates, including AC, HRP, FITC, PE, and Alexa Fluor® 488, 546, 594, 647, 680 and 790.