

Integrin α IIb/ β 3 (A2A9/6): sc-21783

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: ITGB3 (human) mapping to 17q21.32, ITGA2B (human) mapping to 17q21.31.

SOURCE

Integrin α IIb/ β 3 (A2A9/6) is a mouse monoclonal antibody raised against normal human platelets.

PRODUCT

Each vial contains 200 μ g IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin. Also available azide-free for inhibition of platelet aggregation, sc-21783 L, 200 μ g/0.1 ml.

Integrin α IIb/ β 3 (A 2A9/6) is available conjugated to either phycoerythrin (sc-21783 PE) or fluorescein (sc-21783 FITC), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM.

STORAGE

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

RESEARCH USE

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

APPLICATIONS

Integrin α IIb/ β 3 (A2A9/6) is recommended for detection of Integrin α IIb/ β 3 complex of human 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) and flow cytometry (1 μ g per 1 x 10⁶ cells).

Molecular Weight of Integrin α IIb: 136 kDa.

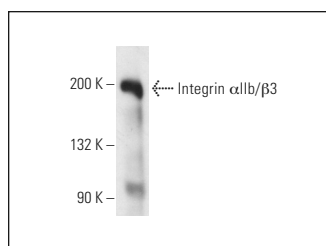
Molecular Weight of Integrin β 3: 125 kDa.

Positive Controls: HEL 92.1.7 cell lysate: sc-2270 or human platelet extract: sc-363773.

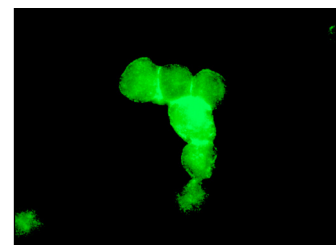
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgG κ BP-FITC: sc-516140 or m-IgG κ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



Integrin α IIb/ β 3 (A2A9/6): sc-21783. Western blot analysis of Integrin α IIb and β 3 expression in human platelet extract under non-reducing conditions.



Integrin α IIb/ β 3 (A2A9/6): sc-21783. Immunofluorescence staining of methanol-fixed THP-1 cells showing membrane and cell junction localization.

SELECT PRODUCT CITATIONS

- Kurtz, L., et al. 2012. Integrin α IIb/ β 3 inside-out activation: an *in situ* conformational analysis reveals a new mechanism. *J. Biol. Chem.* 287: 23255-23265.
- Yang, Y., et al. 2013. Implication of tumor stem-like cells in the tumorigenesis of sporadic paraganglioma. *Med. Oncol.* 30: 659.
- Nanda, S.Y., et al. 2014. Vinculin regulates assembly of talin: β 3 Integrin complexes. *J. Cell. Biochem.* 115: 1206-1216.
- Batram, A.M., et al. 2017. The phosphatidylinositol 3,4,5-trisphosphate (PI(3,4,5)P₃) binder Rasa3 regulates phosphoinositide 3-kinase (PI3K)-dependent Integrin α IIb/ β 3 outside-in signaling. *J. Biol. Chem.* 292: 1691-1704.
- van Dijk, J., et al. 2018. Microtubule polyglutamylation and acetylation drive microtubule dynamics critical for platelet formation. *BMC Biol.* 16: 116.
- Bachsais, M., et al. 2020. CD154 inhibits death of T cells via a *cis* interaction with the α 5 β 1 Integrin. *PLoS ONE* 15: e0235753.
- Siman-Tov, R., et al. 2022. Elevated serum amyloid A levels contribute to increased platelet adhesion in COVID-19 patients. *Int. J. Mol. Sci.* 23: 14243.

CONJUGATES

See **Integrin α IIb (B-9): sc-365938** for Integrin α IIb antibody conjugates, including AC, HRP, FITC, PE, and Alexa Fluor® 488, 546, 594, 647, 680 and 790.