SANTA CRUZ BIOTECHNOLOGY, INC.

Integrin α3 (P1B5): sc-13545

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Integrins are heterodimers composed of noncovalently associated transmembrane α and β subunits. The 16α and 8β 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. The Integrin α3 chain, also known as very late (activation) antigen 3 (VLA-3), very common antigen 2 (VCA-2), extracellular matrix receptor 1 (ECMR1), and galactoprotein b3 (GAPB3), undergoes post-translational cleavage in the extracellular domain to yield disulfide-linked light and heavy chains that join with β1 to form an Integrin that interacts with many extracellular-matrix proteins.

CHROMOSOMAL LOCATION

Genetic locus: ITGA3 (human) mapping to 17q21.33.

SOURCE

Integrin α3 (P1B5) is a mouse monoclonal antibody raised against purified glycoprotein-enriched placenta cells 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 α3 (P1B5) is available conjugated to agarose (sc-13545 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-13545 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-13545 PE), fluorescein (sc-13545 FITC), Alexa Fluor® 488 (sc-13545 AF488), Alexa Fluor® 546 (sc-13545 AF546), Alexa Fluor® 594 (sc-13545 AF594) or Alexa Fluor® 647 (sc-13545 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-13545 AF680) or Alexa Fluor® 790 (sc-13545 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

Integrin α3 (P1B5) is recommended for detection of Integrin α3 of human origin by 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 flow cytometry (1 µg per 1 x 10^6 cells).

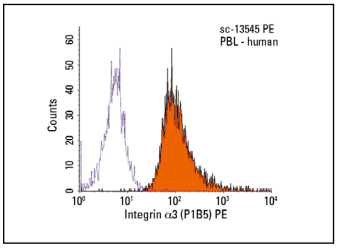
Suitable for use as control antibody for Integrin α3 siRNA (h): sc-35684, Integrin α3 shRNA Plasmid (h): sc-35684-SH and Integrin α3 shRNA (h) Lentiviral Particles: sc-35684-V.

Molecular Weight of Integrin α3: 150 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 α3 (P1B5) PE: sc-13545 PE. FCM analysis of human peripheral blood leukocytes. Black line histogram represents the isotype control, normal mouse IgG_1-PE: sc-2866.

SELECT PRODUCT CITATIONS

1. Borczuk, A.C., et al. 2003. Non-small-cell lung cancer molecular signatures recapitulate lung developmental pathways. Am. J. Pathol. 163: 1949-1960.
2. Seo, D.W., et al. 2008. TIMP-2 disrupts FGF-2-induced downstream signaling pathways. Microvasc. Res. 76: 145-151.
3. Kariya, Y. and Gu, J. 2011. N-glycosylation of β4 integrin controls the adhesion and motility of keratinocytes. PLoS ONE 6: e27084.
4. Lucena, S.E., et al. 2012. Anti-invasive and anti-adhesive activities of a recombinant disintegrin, r-viridistatin 2, derived from the Prairie rattlesnake *(Crotalus viridis viridis)*. Toxicon 60: 31-39.
5. Scheffer, K.D., et al. 2013. Tetraspanin CD151 mediates papillomavirus type 16 endocytosis. J. Virol. 87: 3435-3446.
6. Palmer, T.D., et al. 2014. Integrin-free tetraspanin CD151 can inhibit tumor cell motility upon clustering and is a clinical indicator of prostate cancer progression. Cancer Res. 74: 173-187.
7. Mori, S., et al. 2015. Enhanced expression of Integrin αvβ3 induced by TGF-β is required for the enhancing effect of fibroblast growth factor 1 (FGF1) in TGF-β-induced epithelial-mesenchymal transition (EMT) in mammary epithelial cells. PLoS ONE 10: e0137486.
8. Ozeki, N., et al. 2016. Gelatin scaffold combined with bone morphogenetic protein-4 induces odontoblast-like cell differentiation involving Integrin profile changes, autophagy-related gene 10, and Wnt5 sequentially in human induced pluripotent stem cells. Differentiation 93: 1-14.
9. Chang, P.J., et al. 2017. Diabetes and risk of Kaposi's sarcoma: effects of high glucose on reactivation and infection of Kaposi's sarcoma-associated herpesvirus. Oncotarget 8: 80595-80611.

RESEARCH USE

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