

Integrin α V/ β 3 (23C6): sc-7312

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: ITGAV (human) mapping to 2q32.1, ITGB3 (human) mapping to 17q21.32; Itgav (mouse) mapping to 2 D, Itgb3 (mouse) mapping to 11 E1.

SOURCE

Integrin α V/ β 3 (23C6) is a mouse monoclonal antibody raised from osteoclasts from osteoclastomas 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 α V/ β 3 (23C6) is available conjugated to either phycoerythrin (sc-7312 PE), fluorescein (sc-7312 FITC), Alexa Fluor[®] 488 (sc-7312 AF488), Alexa Fluor[®] 546 (sc-7312 AF546), Alexa Fluor[®] 594 (sc-7312 AF594) or Alexa Fluor[®] 647 (sc-7312 AF647), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-7312 AF680) or Alexa Fluor[®] 790 (sc-7312 AF790), 200 μ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

In addition, Integrin α V/ β 3 (23C6) is available conjugated to Alexa Fluor[®] 405 (sc-7312 AF405), 200 μ g/ml, for IF, IHC(P) and FCM.

Alexa Fluor[®] is a trademark of Molecular Probes, Inc., Oregon, USA

APPLICATIONS

Integrin α V/ β 3 (23C6) is recommended for detection of Integrin α V/ β 3 of mouse, rat, human, African green monkey, Cynomolgus (*Macaca fascicularis*), chicken, bovine, rabbit and porcine origin by 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).

Molecular Weight of Integrin α V: 125-135 kDa.

Molecular Weight of Integrin β 3: 125 kDa.

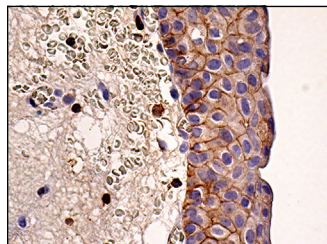
RESEARCH USE

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

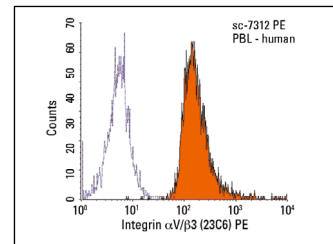
STORAGE

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

DATA



Integrin α V/ β 3 (23C6): sc-7312. Immunoperoxidase staining of formalin fixed, paraffin-embedded human urinary bladder tissue showing membrane staining of urothelial cells.



Integrin α V/ β 3 (23C6) PE: sc-7312 PE. FCM analysis of human peripheral blood leukocytes. Black line histogram represents the isotype control, normal mouse IgG₁-PE: sc-2866.

SELECT PRODUCT CITATIONS

1. Takano, S., et al. 2000. Tissue factor, osteopontin, α v β 3 integrin expression in microvasculature of gliomas associated with vascular endothelial growth factor expression. Br. J. Cancer 82: 1967-1973.
2. He, Z., et al. 2016. Osteopontin and Integrin α V/ β 3 expression during the implantation window in IVF patients with elevated serum progesterone and oestradiol level. Geburtshilfe Frauenheilkd 76: 709-717.
3. Flamini, M.I., et al. 2017. Thyroid hormone controls breast cancer cell movement via Integrin α V/ β 3/SRC/FAK/PI3-kinases. Horm. Cancer 8: 16-27.
4. Manigandan, A., et al. 2018. Responsive nanomicellar theranostic cages for metastatic breast cancer. Bioconjug. Chem. 29: 275-286.
5. Zheng, S., et al. 2019. [^{99m}Tc]3PRGD2 for integrin receptor imaging of esophageal cancer: a comparative study with [¹⁸F]FDG PET/CT. Ann. Nucl. Med. 33: 135-143.
6. Shu, Y., et al. 2020. M2 polarization of tumor-associated macrophages is dependent on integrin β 3 via peroxisome proliferator-activated receptor- γ up-regulation in breast cancer. Immunology 160: 345-356.
7. Brito, V.G.B., et al. 2021. Mast cells contribute to alveolar bone loss in spontaneously hypertensive rats with periodontal disease regulating cytokines production. PLoS ONE 16: e0247372.
8. Rossi, M., et al. 2022. PHGDH heterogeneity potentiates cancer cell dissemination and metastasis. Nature 605: 747-753.
9. Baltazar, T., et al. 2023. 3D bioprinting of an implantable xeno-free vascularized human skin graft. Bioeng. Transl. Med. 8: e10324.

PROTOCOLS

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