SANTA CRUZ BIOTECHNOLOGY, INC.

Integrin α2 (HAS-3): sc-53352

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. Integrin α2 is responsible for adhesion of platelets and other cells to collagens, modulation of collagen and collagenase gene expression, force generation and organization of newly synthesized extracellular matrix.

CHROMOSOMAL LOCATION

Genetic locus: ITGA2 (human) mapping to 5q11.2.

SOURCE

Integrin α2 (HAS-3) is a mouse monoclonal antibody raised against whole keratinocytes of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Integrin α2 (HAS-3) is available conjugated to either phycoerythrin (sc-53352 PE) or fluorescein (sc-53352 FITC), 200 µg/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.

APPLICATIONS

Integrin α2 (HAS-3) is recommended for detection of Integrin α2 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 α2 siRNA (h): sc-29371, Integrin α2 shRNA Plasmid (h): sc-29371-SH and Integrin α2 shRNA (h) Lentiviral Particles: sc-29371-V.

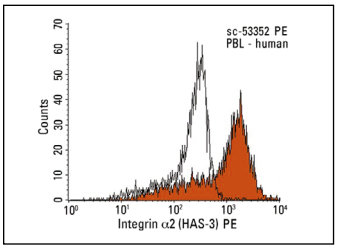
Molecular Weight of Integrin α2: 150 kDa.

Positive Controls: BJAB whole cell lysate: sc-2207, CCRF-CEM cell lysate: sc-2225 or HeLa whole cell lysate: sc-2200.

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 2) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850. 3) Immunohistochemistry: use m-IgGκ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



Integrin α2 (HAS-3): sc-53352. Indirect FCM analysis of human peripheral blood leukocytes stained with Integrin α2 (HAS-3), followed by PE-conjugated goat anti-mouse IgG_{2a}: sc-3765. Black line histogram represents the isotype control, normal mouse IgG_{2a}: sc-3878.

SELECT PRODUCT CITATIONS

1. Trerotola, M., et al. 2010. CD133, Trop-2 and α2β1 integrin surface receptors as markers of putative human prostate cancer stem cells. Am. J. Transl. Res. 2: 135-144.
2. Teklemariam, T., et al. 2011. Functional analysis of a recombinant PIII-SVMP, GST-acocostatin; an apoptotic inducer of HUVEC and HeLa, but not SK-Mel-28 cells. Toxicon 57: 646-656.
3. 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.
4. Zuliani, T., et al. 2013. Fetal fibroblasts and keratinocytes with immunosuppressive properties for allogeneic cell-based wound therapy. PLoS ONE 8: e70408.
5. Taubenberger, A.V., et al. 2016. 3D extracellular matrix interactions modulate tumour cell growth, invasion and angiogenesis in engineered tumour microenvironments. Acta Biomater. 36: 73-85.
6. Willbold, R., et al. 2019. Excess hepsin proteolytic activity limits oncogenic signaling and induces ER stress and autophagy in prostate cancer cells. Cell Death Dis. 10: 601.

RESEARCH USE

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