

# Integrin $\alpha 5$ (SAM-1): sc-52595

## BACKGROUND

Integrins are heterodimers composed of noncovalently associated transmembrane  $\alpha$  and  $\beta$  subunits. The 16  $\alpha$  and 8  $\beta$  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.

## REFERENCES

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- Kaabeche, K., Guenou, H., Bouvard, D., Didelot, N., Listrat, A. and Marie, P.J. 2005. Cbl-mediated ubiquitination of  $\alpha 5$  Integrin subunit mediates Fibronectin-dependent osteoblast detachment and apoptosis induced by FGFR2 activation. *J. Cell Sci.* 118: 1223-1232.
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## CHROMOSOMAL LOCATION

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

## SOURCE

Integrin  $\alpha 5$  (SAM-1) is a mouse monoclonal antibody raised against U-937 cell line of human origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG<sub>2b</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Integrin  $\alpha 5$  (SAM-1) is available conjugated to either phycoerythrin (sc-52595 PE) or fluorescein (sc-52595 FITC), 200  $\mu$ g/ml, for IF, IHC(P) and FCM.

## APPLICATIONS

Integrin  $\alpha 5$  (SAM-1) is recommended for detection of Integrin  $\alpha 5$  of human origin by immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and flow cytometry (1  $\mu$ g per  $1 \times 10^6$  cells); also recommended for detection of various cells of non-hemopoietic origin.

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

## RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Immunofluorescence: use m-IgG $\kappa$  BP-FITC: sc-516140 or m-IgG $\kappa$  BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz<sup>®</sup> Mounting Medium: sc-24941 or UltraCruz<sup>®</sup> Hard-set Mounting Medium: sc-359850.

## SELECT PRODUCT CITATIONS

- Xue, M.M., Ning, R.L., Huang, J.S., Li, Z., Li, R., Xu, H.L. and Dong, Q.G. 2012. Research of stem cell isotype of human lung cancer and biologic function of gene PLAGL2. *Chinese J. Cell Biol.* 34: 366-375.

## 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.

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) for detailed protocols and support products.



See **Integrin  $\alpha 5$  (C-9): sc-376199** for Integrin  $\alpha 5$  antibody conjugates, including AC, HRP, FITC, PE, Alexa Fluor<sup>®</sup> 488 and Alexa Fluor<sup>®</sup> 647.