SANTA CRUZ BIOTECHNOLOGY, INC.

Integrin αM (2LPM19c): sc-20050

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Integrin αM, also designated complement component receptor-3 α, CD11b (p170), macrophage antigen α polypeptide, cell surface glycoprotein Mac-1 α subunit, MAC1A, MO1A and ITGAM) is a cell adhesion molecule that acts as a receptor for cell surface ligands such as intracellular adhesion molecules (ICAMs) or soluble ligands. Integrins are heterodimeric proteins that contain an α chain and β chain. Integrin αM combines with the Integrin β2 to form a leukocyte-specific integrin referred to as macrophage receptor 1 (Mac-1), or inactivated-C3b (iC3b) receptor 3 (CR3). Integrin αM/β2 is important in the adherence of neutrophils and monocytes to stimulated endothelium, and also in the phagocytosis of complement coated particles.

CHROMOSOMAL LOCATION

Genetic locus: ITGAM (human) mapping to 16p11.2; Itgam (mouse) mapping to 7 F3.

SOURCE

Integrin αM (2LPM19c) is a mouse monoclonal antibody raised against purified iC3b receptor.

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 αM (2LPM19c) is available conjugated to agarose (sc-20050 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to either phycoerythrin (sc-20050 PE), fluorescein (sc-20050 FITC), Alexa Fluor® 488 (sc-20050 AF488), Alexa Fluor® 546 (sc-20050 AF546), Alexa Fluor® 594 (sc-20050 AF594) or Alexa Fluor® 647 (sc-20050 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-20050 AF680) or Alexa Fluor® 790 (sc-20050 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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

APPLICATIONS

Integrin αM (2LPM19c) is recommended for detection of Integrin αM of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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) and flow cytometry (1 µg per 1 x 10^6 cells).

Suitable for use as control antibody for Integrin αM siRNA (h): sc-37261, Integrin αM siRNA (m): sc-35693, Integrin αM shRNA Plasmid (h): sc-37261-SH, Integrin αM shRNA Plasmid (m): sc-35693-SH, Integrin αM shRNA (h) Lentiviral Particles: sc-37261-V and Integrin αM shRNA (m) Lentiviral Particles: sc-35693-V.

Molecular Weight of Integrin αM: 170 kDa.

Positive Controls: human PBL whole cell lysate.

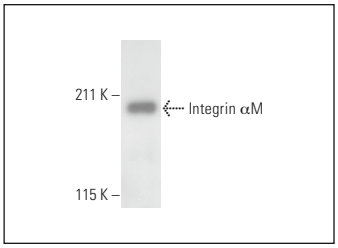
STORAGE

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

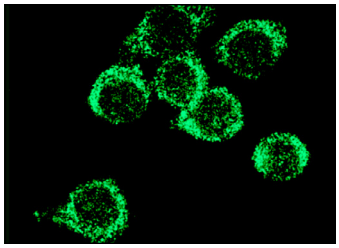
RESEARCH USE

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

DATA



Western blot analysis of Integrin αM expression in human PBL whole cell lysate immunoprecipitated with Integrin αM (2LPM19c): sc-20050 and detected with Integrin αM (H-61): sc-28664.



Integrin αM (2LPM19c): sc-20050. Immunofluorescence staining of methanol-fixed RAW 264.7 cells showing membrane staining.

SELECT PRODUCT CITATIONS

1. Liu, J., et al. 2006. Paeoniflorin attenuates chronic cerebral hypoperfusion-induced learning dysfunction and brain damage in rats. Brain Res. 1089: 162-170.
2. Osicka, R., et al. 2015. *Bordetella* adenylate cyclase toxin is a unique ligand of the integrin complement receptor 3. Elife 4: e10766.
3. Chen, X.W., et al. 2017. Recruitment of $CD11b^+Ly6C^+$ monocytes in non-small cell lung cancer xenografts challenged by anti-VEGF antibody. Oncol. Lett. 14: 615-622.
4. Thinn, A.M.M., et al. 2018. The membrane-distal regions of Integrin α cytoplasmic domains contribute differently to integrin inside-out activation. Sci. Rep. 8: 5067.
5. Shi, C., et al. 2019. Leukocyte integrin signaling regulates FOXP1 gene expression via FOXP1-IT1 long non-coding RNA-mediated IRAK1 pathway. Biochim. Biophys. Acta Gene Regul. Mech. 1862: 493-508.
6. Tabata, H., et al. 2020. Syk facilitates phagosome-lysosome fusion by regulating Actin-remodeling in complement-mediated phagocytosis. Sci. Rep. 10: 22086.
7. Vanisree, A.J., et al. 2021. Enriched environment minimizes anxiety/depressive-like behavior in rats exposed to immobilization stress and augments hippocampal neurogenesis *(in vitro)*. J. Mol. Neurosci. 71: 2071-2084.
8. Matsusaka, K., et al. 2022. Distinct roles in phagocytosis of the early and late increases of cell surface calreticulin induced by oxaliplatin. Biochem. Biophys. Rep. 29: 101222.
9. Bakke, D.S., et al. 2023. Myeloid vitamin D receptor regulates Paneth cells and microbial homeostasis. FASEB J. 37: e22957.

PROTOCOLS

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