

Integrin α X (3.9): sc-1185

BACKGROUND

Integrin α X (CD11c, leukocyte surface antigen p150,95, CR4, Axb2) is a type 1 transmembrane protein that traditionally combines with β 2 chain to form a leukocyte-specific integrin known as inactivated-C3b (iC3b) receptor 4 (CR4). Integrin α X/ β 2 shares similar properties of the α M/ β 2 Integrin in mediating adherence of neutrophils and monocytes to stimulated endothelial cells, and in phagocytosis of complement coated particles. Abnormal expression of Integrin α X is characteristic of hairy cell leukemia (HCL) and is dependent upon activation of proto-oncogenes Ras and JunD. Proteins and DNA elements that influence transcription of Integrin α X include Sp1 and Sp1-like factors, AP-1 family, C/EBP, Oct-2 and PU.1. Integrin α X is present on monocyte derivative dendritic cells (DCs), macrophages and NK cells. Upon activation, DCs present in skin (Langerhans cells), lining of nose, lung, stomach, intestine and blood can migrate to lymphoid tissues and interact with T and B cells to initiate and shape the immune response.

REFERENCES

1. Nham, S.U. 1999. Characteristics of fibrinogen binding to the domain of CD11c, an α subunit of p150,95. *Biochem. Biophys. Res. Commun.* 264: 630-634.
2. Binder, R.J., et al. 2000. Cutting edge: heat shock protein gp96 induces maturation and migration of CD11c⁺ cells *in vivo*. *J. Immunol.* 165: 6029-6035.
3. Langeeggen, H., et al. 2002. Human umbilical vein endothelial cells express complement receptor 1 (CD35) and complement receptor 4 (CD11c/CD18) *in vitro*. *Inflammation* 26: 103-110.
4. Nicolaou, F., et al. 2003. CD11c gene expression in hairy cell leukemia is dependent upon activation of the proto-oncogenes Ras and JunD. *Blood* 101: 4033-4041.

CHROMOSOMAL LOCATION

Genetic locus: ITGAX (human) mapping to 16p11.2.

SOURCE

Integrin α X (3.9) is a mouse monoclonal antibody raised against human monocytes.

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 X (3.9) is available conjugated to either phycoerythrin (sc-1185 PE), fluorescein (sc-1185 FITC) or Alexa Fluor[®] 488 (sc-1185 AF488) or Alexa Fluor[®] 647 (sc-1185 AF647), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM.

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STORAGE

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

APPLICATIONS

Integrin α X (3.9) is recommended for detection of Integrin α X of human 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) and flow cytometry (1 μ g per 1 x 10⁶ cells).

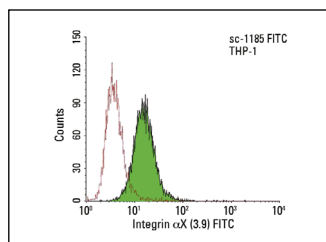
Suitable for use as control antibody for Integrin α X siRNA (h): sc-35695, Integrin α X shRNA Plasmid (h): sc-35695-SH and Integrin α X shRNA (h) Lentiviral Particles: sc-35695-V.

Molecular Weight of Integrin α X: 145 kDa.

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-IgG κ BP-FITC: sc-516140 or m-IgG κ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz[®] Mounting Medium: sc-24941 or UltraCruz[®] Hard-set Mounting Medium: sc-359850.

DATA



Integrin α X (3.9) FITC: sc-1185 FITC. FCM analysis of THP-1 cells. Black line histogram represents the isotype control, normal mouse IgG₁-FITC : sc-2855.

SELECT PRODUCT CITATIONS

1. Zhang, J.Z., et al. 2003. L-Selectin and E-Selectin expressed on monocytes mediating *Ehrlichia chaffeensis* attachment onto host cells. *FEMS Microbiol. Lett.* 227: 303-309.
2. Tan, P.H., et al. 2005. Immunolipoplexes: an efficient, nonviral alternative for transfection of human dendritic cells with potential for clinical vaccination. *Mol. Ther.* 11: 790-800.
3. Liu, H., et al. 2018. PRDM4 mediates YAP-induced cell invasion by activating leukocyte-specific Integrin β 2 expression. *EMBO Rep.* 19: e45180.
4. Lou, F., et al. 2020. Excessive polyamine generation in keratinocytes promotes self-RNA sensing by dendritic cells in psoriasis. *Immunity* 53: 204-216.e10.

RESEARCH USE

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