

# Integrin $\alpha$ X (HC1/1): sc-53998

## BACKGROUND

Integrin  $\alpha$ X (CD11c, leukocyte surface antigen p150/95, CR4, Axb2) is a type 1 transmembrane protein that traditionally combines with  $\beta$ 2 chain to form a leukocyte-specific integrin known as inactivated-C3b (iC3b) receptor 4 (CR4). Integrin  $\alpha$ X/ $\beta$ 2 shares similar properties of the Integrin  $\alpha$ M/ $\beta$ 2 in mediating adherence of neutrophils and monocytes to stimulated endothelial cells and in phagocytosis of complement coated particles. Abnormal expression of Integrin  $\alpha$ 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  $\alpha$ X include Sp1 and Sp1-like factors, AP-1 family, C/EBP, Oct-2 and PU.1. Integrin  $\alpha$ X is present on monocyte deriv-active 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

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2. Binder, R.J., et al. 2000. Cutting edge: heat shock protein gp96 induces maturation and migration of CD11c<sup>+</sup> 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.
5. Edwards, A.D., et al. 2003. Relationships among murine CD11c (high) dendritic cell subsets as revealed by baseline gene expression patterns. *J. Immunol.* 171: 47-60.
6. Paharkova-Vatchkova, V., et al. 2004. Estrogen preferentially promotes the differentiation of CD11c<sup>+</sup> CD11b (intermediate) dendritic cells from bone marrow precursors. *J. Immunol.* 172: 1426-1436.
7. Scumpia, P.O., et al. 2005. CD11c<sup>+</sup> dendritic cells are required for survival in murine polymicrobial sepsis. *J. Immunol.* 175: 3282-3286.
8. Sundquist, M., et al. 2005. TNF $\alpha$ -dependent and -independent maturation of dendritic cells and recruited CD11c (int) CD11b<sup>+</sup> cells during oral *Salmonella* infection. *J. Immunol.* 175: 3287-3298.

## STORAGE

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

## PROTOCOLS

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

## CHROMOSOMAL LOCATION

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

## SOURCE

Integrin  $\alpha$ X (HC1/1) is a mouse monoclonal antibody raised against monocytic U-937 phorbol ester-treated cells of human origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG<sub>1</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Integrin  $\alpha$ X (HC1/1) is available conjugated to either phycoerythrin (sc-53998 PE) or fluorescein (sc-53998 FITC), 200  $\mu$ g/ml, for WB (RGB), IF, IHC(P) and FCM.

## APPLICATIONS

Integrin  $\alpha$ X (HC1/1) is recommended for detection of Integrin  $\alpha$ X of human origin by immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g of total protein (1 ml of cell lysate)] and flow cytometry (1  $\mu$ g per 1 x 10<sup>6</sup> cells).

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

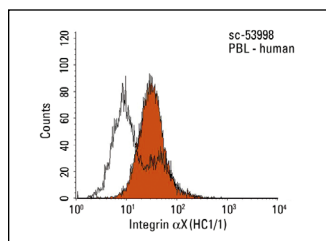
Molecular Weight of Integrin  $\alpha$ X: 145 kDa.

## 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).

## DATA



Integrin  $\alpha$ X (HC1/1): sc-53998. Indirect FCM analysis of human peripheral blood leukocytes stained with Integrin  $\alpha$ X (HC1/1), followed by PE-conjugated goat anti-mouse IgG: sc-3738. Black line histogram represents the isotype control, normal mouse IgG<sub>1</sub>: sc-3877.

## RESEARCH USE

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

## CONJUGATES

See **Integrin  $\alpha$ X (B-6): sc-46676** for Integrin  $\alpha$ X antibody conjugates, including AC, HRP, FITC, PE, Alexa Fluor<sup>®</sup> 488 and Alexa Fluor<sup>®</sup> 647.