

# Integrin $\alpha$ X (R-113): sc-30137

## 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  $\alpha$ M/ $\beta$ 2 Integrin 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 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 alpha subunit of p150,95. *Biochem. Biophys. Res. Commun.* 264: 630-634.
2. Binder, R.J., et al. 2000. Cutting edge: heat shock protein  $\gamma$ p96 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.
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+ CD11b (intermediate) dendritic cells from bone marrow precursors. *J. Immunol.* 172: 1426-1436.
7. Tian, T., et al. 2005. *In vivo* depletion of CD11c+ cells delays the CD4+ T cell response to Mycobacterium tuberculosis and exacerbates the outcome of infection. *J. Immunol.* 175: 3268-3272.
8. Scumpia, P.O., et al. 2005. CD11c+ dendritic cells are required for survival in murine polymicrobial sepsis. *J. Immunol.* 175: 3282-3286.
9. Sundquist, M., et al. 2005. TNF $\alpha$ -dependent and -independent maturation of dendritic cells and recruited CD11c (int) CD11b+ cells during oral salmonella infection. *J. Immunol.* 175: 3287-3298.

## SOURCE

Integrin  $\alpha$ X (R-113) is a rabbit polyclonal antibody raised against amino acids 918-1030 mapping near the C-terminus of Integrin  $\alpha$ X of rat origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

## APPLICATIONS

Integrin  $\alpha$ X (R-113) is recommended for detection of Integrin  $\alpha$ X of rat origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

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

## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker<sup>™</sup> compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker<sup>™</sup> Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz<sup>™</sup> Mounting Medium: sc-24941.

## 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) or our catalog for detailed protocols and support products.



Try **Integrin  $\alpha$ X (D-8): sc-398708**, our highly recommended monoclonal alternative to Integrin  $\alpha$ X (R-113). Also, for AC, HRP, FITC, PE, Alexa Fluor<sup>®</sup> 488 and Alexa Fluor<sup>®</sup> 647 conjugates, **see Integrin  $\alpha$ X (D-8): sc-398708**.