

# CD84 (0.N.167): sc-70809

## BACKGROUND

The human CD84 gene maps to chromosome 1q23.3 and is composed of at least eight exons, with an exon coding for the 5' UTR and the leader peptide, two exons coding for each of the two extracellular Ig-like domains, an exon encoding the hydrophobic transmembrane region and four exons coding for the cytoplasmic domains. The extracellular Ig-like domains share structural and sequence homology with a group of members of the Ig superfamily that include CD2, CD48, CD58 and Ly9. Five CD84 isoforms have been characterized, including CD84a, CD84b, CD84c, CD84d and CD84e, which are preferentially expressed on B lymphocytes, monocytes and platelets, where they act as their own ligand and are therefore costimulatory molecules. The CD84 isoforms are generated by alternative exon enhancement, reading frame shift and use of cryptic splice sites. The differential expression of potential sites of phosphorylation on the different isoforms may be a way to regulate CD84 activity in signal transduction.

## REFERENCES

- de la Fuente, M.A., Pizcueta, P., Nadal, M., Bosch, J. and Engel, P. 1997. CD84 leukocyte antigen is a new member of the Ig superfamily. *Blood* 90: 2398-2405.
- Palou, E., Piroto, F., Sole, J., Freed, J.H., Peral, B., Vilardell, C., Vilella, R., Vives, J. and Gaya, A. 2000. Genomic characterization of CD84 reveals the existence of five isoforms differing in their cytoplasmic domains. *Tissue Antigens* 55: 118-127.
- Online Mendelian Inheritance in Man, OMIM™. 2000. Johns Hopkins University, Baltimore, MD. MIM Number: 604513. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
- Martin, M., Romero, X., de la Fuente, M.A., Tovar, V., Zapater, N., Esplugues, E., Pizcueta, P., Bosch, J. and Engel, P. 2001. CD84 functions as a homophilic adhesion molecule and enhances IFN- $\gamma$  secretion: adhesion is mediated by Ig-like domain 1. *J. Immunol.* 167: 3668-3676.
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## CHROMOSOMAL LOCATION

Genetic locus: CD84 (human) mapping to 1q23.3; Cd84 (mouse) mapping to 1 H3.

## SOURCE

CD84 (0.N.167) is a mouse monoclonal antibody raised against spleen cells of a patient with hairy cell leukemia.

## PRODUCT

Each vial contains 200  $\mu$ g IgG $_1$  kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

CD84 (0.N.167) is available conjugated to either phycoerythrin (sc-70809 PE) or fluorescein (sc-70809 FITC), 200  $\mu$ g/ml, for IF, IHC(P) and FCM.

## RESEARCH USE

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

## APPLICATIONS

CD84 (0.N.167) is recommended for detection of CD84 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1,000), 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 flow cytometry (1  $\mu$ g per 1 x 10<sup>6</sup> cells).

Suitable for use as control antibody for CD84 siRNA (h): sc-42810, CD84 siRNA (m): sc-42811, CD84 shRNA Plasmid (h): sc-42810-SH, CD84 shRNA Plasmid (m): sc-42811-SH, CD84 shRNA (h) Lentiviral Particles: sc-42810-V and CD84 shRNA (m) Lentiviral Particles: sc-42811-V.

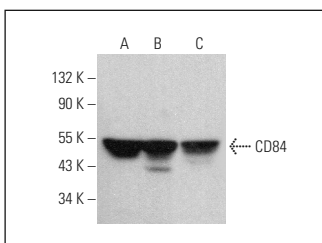
Molecular Weight of CD84: 64-82 kDa.

Positive Controls: RAW 264.7 whole cell lysate: sc-2211, Neuro-2A whole cell lysate: sc-364185 or C6 whole cell lysate: sc-364373.

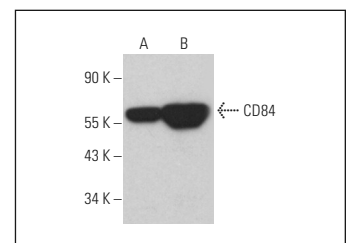
## RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG $\kappa$  BP-HRP: sc-516102 or m-IgG $\kappa$  BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 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 m-IgG $\kappa$  BP-FITC: sc-516140 or m-IgG $\kappa$  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



CD84 (0.N.167): sc-70809. Western blot analysis of CD84 expression in RAW 264.7 (A), Neuro-2A (B) and C6 (C) whole cell lysates.



CD84 (0.N.167): sc-70809. Western blot analysis of CD84 expression in EOC 20 (A) and RAW 264.7 (B) whole cell lysates.

## 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.