

ICAM-2 (CBR-IC2/2): sc-23935

BACKGROUND

Cell adhesion molecules are a family of closely related cell surface glycoproteins involved in cell-cell interactions during growth and are thought to play important, yet separate, roles in embryogenesis and development. The intracellular adhesion molecule-1 (ICAM-1), also referred to as CD54, is an integral membrane protein of the immunoglobulin superfamily and recognizes the $\beta 2\alpha 1$ and $\beta 2\alpha M$ Integrins. ICAM-2 functions as a ligand for lymphocyte function-associated antigen-1 (LFA-1) and is involved in leukocyte adhesion. ICAM-3 is highly expressed on the surface of human eosinophils, and when bound to ligand may inhibit eosinophil inflammatory responses and survival. ICAM-4, also known as LW glycoprotein, interacts with Integrins $\alpha L\beta 2$, $\alpha M\beta 2$, $\alpha 4\beta 1$, the αV family and $\alpha IIb\beta 3$, and selective binding to different Integrins may be relevant to the pathology in a number of red blood cell associated diseases. Lastly, ICAM-5, expressed on telencephalic neurons, binds CD11 α /CD18 and thus may act as an adhesion molecule for leukocyte binding in the central nervous system.

REFERENCES

1. Jorgensen, O.S. 1995. Neural cell adhesion molecule (NCAM) as a quantitative marker in synaptic remodeling. *Neurochem. Res.* 20: 533-547.
2. Edelman, G.M. and Jones, F.S. 1995. Developmental control of NCAM expression by Hox and Pax gene products. *Philos. Trans. R. Soc. Lond. B Biol. Sci.* 349: 305-312.
3. Briskin, M.J., et al. 1996. Structural requirements for mucosal vascular addressin binding to its lymphocyte receptor $\alpha 4\beta 7$. Common themes among Integrin-Ig family interactions. *J. Immunol.* 156: 719-726.
4. Heiska, L., et al. 1996. Binding of the cytoplasmic domain of intercellular adhesion molecule-2 (ICAM-2) to α -actinin. *J. Biol. Chem.* 271: 26214-26219.
5. Tian, L., et al. 2000. Binding of T lymphocytes to hippocampal neurons through ICAM-5 (telencephalin) and characterization of its interaction with the leukocyte Integrin CD11a/CD18. *Eur. J. Immunol.* 30: 810-818.

CHROMOSOMAL LOCATION

Genetic locus: ICAM-2 (human) mapping to 17q23.3.

SOURCE

ICAM-2 (CBR-IC2/2) is a mouse monoclonal antibody raised against cells transfected with recombinant human ICAM-2.

PRODUCT

Each vial contains 200 μ g IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

ICAM-2 (CBR-IC2/2) is available conjugated to either phycoerythrin (sc-23935 PE) or fluorescein (sc-23935 FITC), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM.

STORAGE

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

APPLICATIONS

ICAM-2 (CBR-IC2/2) is recommended for detection of ICAM-2 of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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) and flow cytometry (1 μ g per 1 x 10⁶ cells).

Suitable for use as control antibody for ICAM-2 siRNA (h): sc-35626, ICAM-2 shRNA Plasmid (h): sc-35626-SH and ICAM-2 shRNA (h) Lentiviral Particles: sc-35626-V.

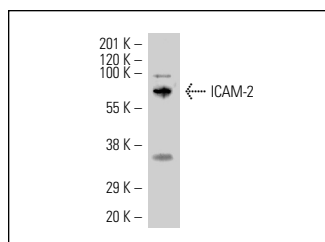
Molecular Weight of ICAM-2: 55-80 kDa.

Positive Controls: HL-60 whole cell lysate: sc-2209 or NAMALWA cell lysate: sc-2234.

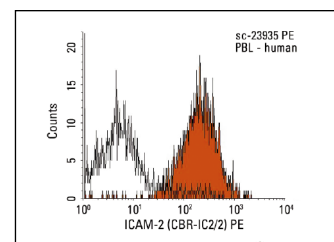
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ 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 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



Western blot analysis of ICAM-2 expression in HL-60 whole cell lysate immunoprecipitated with ICAM-2 (CBR-IC2/2): sc-23935 and detected with ICAM-2 (H-159): sc-7933.



ICAM-2 (CBR-IC2/2) PE: sc-23935 PE. FCM analysis of human peripheral blood leukocytes. Black line histogram represents the isotype control, normal mouse IgG_{2a}: sc-2867.

SELECT PRODUCT CITATIONS

1. Kuo, C.H., et al. 2012. The recombinant lectin-like domain of thrombospondin inhibits angiogenesis through interaction with Lewis Y antigen. *Blood* 119: 1302-1313.
2. Feduska, J.M., et al. 2013. N-glycosylation of ICAM-2 is required for ICAM-2-mediated complete suppression of metastatic potential of SK-N-AS neuroblastoma cells. *BMC Cancer* 13: 261.
3. Feduska, J.M., et al. 2015. ICAM-2 confers a non-metastatic phenotype in neuroblastoma cells by interaction with α -actinin. *Oncogene* 34: 1553-1562.

RESEARCH USE

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