SANTA CRUZ BIOTECHNOLOGY, INC.

OX2 (6A387): sc-71764

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

OX2 (CD200, MOX2), a member of the immunoglobulin superfamily (IgSF), is a 248 residue cell surface glycoprotein that is expressed in lymphoid cells, neurons and endothelium. OX2 receptor (OX2R) is a membrane protein with up to 70% of its weight derived from N-linked glycosylation; it is primarily expressed in lymphoid and neuronal tissue. Phylogenetic analysis of OX2R with respect to other leukocyte IgSF glycoproteins suggests that OX2R and OX2 share a common ancestral protein. The cytoplasmic portion of OX2R contains NPXY motifs that are known to interact with PTB/PID binding domains. The interaction between OX2 and OX2R may contribute to pathways that suppress and limit macrophage induced inflammatory damage in tissue.

REFERENCES

1. McMaster, W.R. and Williams, A.F. 1979. Identification of Ia glycoproteins in rat thymus and purification from rat spleen. Eur. J. Immunol. 9: 426-433.
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3. Wright, G.J., Puklavec, M.J., Willis, A.C., Hoek, R.M., Sedgwick, J.D., Brown, M.H. and Barclay, A.N. 2000. Lymphoid/neuronal cell surface OX2 glycoprotein recognizes a novel receptor on macrophages implicated in the control of their function. Immunity 13: 233-242.
4. Gorczynski, R.M., Yu, K. and Clark, D. 2000. Receptor engagement on cells expressing a ligand for the tolerance-inducing molecule OX2 induces an immunoregulatory population that inhibits alloreactivity *in vitro* and *in vivo*. J. Immunol. 165: 4854-4860.
5. Hoek, R.M., Ruuls, S.R., Murphy, C.A., Wright, G.J., Goddard, R., Zurawski, S.M., Blom, B., Homola, M.E., Streit, W.J., Brown, M.H., Barclay, A.N. and Sedgwick, J.D. 2000. Downregulation of the macrophage lineage through interaction with OX2 (CD200). Science 290: 1768-1771.
6. Dick, A.D., Broderick, C., Forrester, J.V. and Wright, G.J. 2001. Distribution of OX2 antigen and OX2 receptor within retina. Invest. Ophthalmol. Vis. Sci. 42: 170-176.
7. Nathan, C. and Muller, W.A. 2001. Putting the brakes on innate immunity: a regulatory role for CD200. Nat. Immunol. 2: 17-19.
8. Broderick, C., Hoek, R.M., Forrester, J.V., Liversidge, J., Sedgwick, J.D. and Dick, A.D. 2002. Constitutive retinal CD200 expression regulates resident microglia and activation state of inflammatory cells during experimental autoimmune uveoretinitis. Am. J. Pathol. 161: 1669-1677.

CHROMOSOMAL LOCATION

Genetic locus: Cd200 (mouse) mapping to 16 B5.

SOURCE

OX2 (6A387) is a rat monoclonal antibody raised against OX2 of mouse origin.

RESEARCH USE

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

PRODUCT

Each vial contains 200 µg IgG_{2a} in 1.0 ml PBS with < 0.1% sodium azide and 0.1% gelatin.

OX2 (6A387) is available conjugated to either phycoerythrin (sc-71764 PE) or fluorescein (sc-71764 FITC), 200 µg/ml, for IF, IHC(P) and FCM.

APPLICATIONS

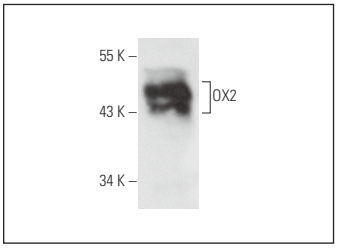
OX2 (6A387) is recommended for detection of OX2 a cell surface antigen of mouse origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and flow cytometry (1 µg per 1 x 10^6 cells).

Suitable for use as control antibody for OX2 siRNA (m): sc-42955, OX2 shRNA Plasmid (m): sc-42955-SH and OX2 shRNA (m) Lentiviral Particles: sc-42955-V.

Molecular Weight of OX2: 41-47 kDa.

Positive Controls: mouse brain extract: sc-2253, J774.A1 cell lysate: sc-3802 or CCRF-CEM cell lysate: sc-2225.

DATA



OX2 (6A387): sc-71764. Western blot analysis of OX2 expression in mouse brain tissue extract.

SELECT PRODUCT CITATIONS

1. Singh, V., et al. 2022. MicroRNA-129-5p-regulated microglial expression of the surface receptor CD200R1 controls neuroinflammation. J. Biol. Chem. 298: 101521.

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 for detailed protocols and support products.