

OX2 (H-9): sc-377314

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, and 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., et al. 1979. Identification of Ia glycoproteins in rat thymus and purification from rat spleen. *Eur. J. Immunol.* 9: 426-433.
2. McCaughan, G.W., et al. 1987. The gene for MRC OX-2 membrane glycoprotein is localized on human chromosome 3. *Immunogenetics* 25: 133-135.
3. Wright, G.J., et al. 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. Hoek, R.M., et al. 2000. Down-regulation of the macrophage lineage through interaction with OX2 (CD200). *Science* 290: 1768-1771.
5. Hoek, R.M., et al. 2000. Down-regulation of the macrophage lineage through interaction with OX2 (CD200). *Science* 290: 1768-1771.
6. Gorczynski, R.M., et al. 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.
7. Nathan, C., et al. 2001. Putting the brakes on innate immunity: a regulatory role for CD200? *Nat. Immunol.* 2: 17-19.
8. Dick, A.D., et al. 2001. Distribution of OX2 antigen and OX2 receptor within retina. *Invest. Ophthalmol. Vis. Sci.* 42: 170-176.
9. Broderick, C., et al. 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 (human) mapping to 3q13.2; Cd200 (mouse) mapping to 16 B5.

SOURCE

OX2 (H-9) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 247-270 at the C-terminus of OX2 of human origin.

PRODUCT

Each vial contains 200 µg IgM in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

OX2 (H-9) is recommended for detection of OX2 glycoprotein of mouse and human origin by Western Blotting (starting dilution 1:100, 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 solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for OX2 siRNA (h): sc-42954, OX2 siRNA (m): sc-42955, OX2 shRNA Plasmid (h): sc-42954-SH, OX2 shRNA Plasmid (m): sc-42955-SH, OX2 shRNA (h) Lentiviral Particles: sc-42954-V and OX2 shRNA (m) Lentiviral Particles: sc-42955-V.

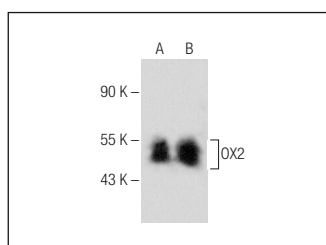
Molecular Weight of OX2: 41-47 kDa.

Positive Controls: CCRF-CEM cell lysate: sc-2225, CCRF-HSB-2 cell lysate: sc-2265 or mouse brain extract: sc-2253.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-mouse IgM-HRP: sc-2064 (dilution range: 1:500-1:5,000), TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein L PLUS-Agarose: sc-2336 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use goat anti-mouse IgM-FITC: sc-2082 (dilution range: 1:100-1:400) or goat anti-mouse IgM-TR: sc-2983 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



OX2 (H-9): sc-377314. Western blot analysis of OX2 expression in CCRF-CEM (A) and CCRF-HSB-2 (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.

RESEARCH USE

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

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.