

OXR1 (A-4): sc-271707

BACKGROUND

Oxidative stress-responsive 1 protein (OXR1), a protein of 527 amino acids, belongs to the STE20 subfamily. OXR1 is one of two human homologs of Fray, a serine/threonine kinase expressed in *Drosophila*. OXR1 binds to and phosphorylates p21-activated protein kinase (PAK1) and regulates downstream kinases in response to environmental stress. Endogenous OXR1 is activated only by osmotic stresses, notably sorbitol and to a lesser extent NaCl. OXR1 may also play a role in regulating the Actin cytoskeleton. The chloride channel proteins SLC12A1, SLC12A2 and SLC12A6 isoform 2 interact with OXR1, but SLC12A4 and SLC12A7 do not. The WNK1 and WNK4 protein kinases activate OXR1 by phosphorylating its T-loop. The OXR1 protein is widely expressed in mammalian tissues.

REFERENCES

1. Tamari, M., et al. 1999. Isolation and characterization of a novel serine/threonine kinase gene on chromosome 3p22-21.3. *J. Hum. Genet.* 44: 116-120.
2. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 604046. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
3. Chen, W., et al. 2004. Characterization of OSR1, a member of the mammalian STE20p/germinal center kinase subfamily. *J. Biol. Chem.* 279: 11129-11136.
4. Hu, W., et al. 2004. The novel molecule porcine OSR1 upregulated expression on porcine endothelial cells by human peripheral blood mononuclear cell activation. *Transplant. Proc.* 36: 2475-2477.

CHROMOSOMAL LOCATION

Genetic locus: OXR1 (human) mapping to 3p22.2; Oxsr1 (mouse) mapping to 9 F3.

SOURCE

OXR1 (A-4) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 6-27 at the N-terminus of OXR1 of human origin.

PRODUCT

Each vial contains 200 µg IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

OXR1 (A-4) is available conjugated to agarose (sc-271707 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-271707 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-271707 PE), fluorescein (sc-271707 FITC), Alexa Fluor® 488 (sc-271707 AF488), Alexa Fluor® 546 (sc-271707 AF546), Alexa Fluor® 594 (sc-271707 AF594) or Alexa Fluor® 647 (sc-271707 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-271707 AF680) or Alexa Fluor® 790 (sc-271707 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-271707 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

APPLICATIONS

OXR1 (A-4) is recommended for detection of OXR1 of mouse, rat 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 OXR1 siRNA (h): sc-61273, OXR1 siRNA (m): sc-61274, OXR1 shRNA Plasmid (h): sc-61273-SH, OXR1 shRNA Plasmid (m): sc-61274-SH, OXR1 shRNA (h) Lentiviral Particles: sc-61273-V and OXR1 shRNA (m) Lentiviral Particles: sc-61274-V.

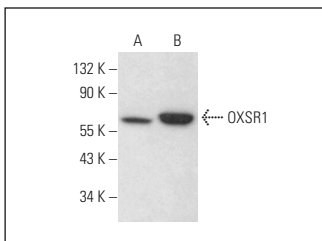
Molecular Weight of OXR1: 58 kDa.

Positive Controls: OXR1 (h3): 293 Lysate: sc-158793, HeLa whole cell lysate: sc-2200 or NIH/3T3 whole cell lysate: sc-2210.

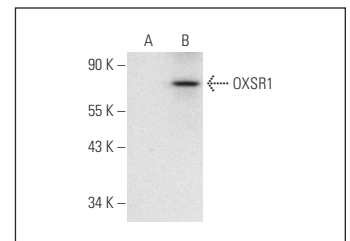
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ 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-IgGκ BP-FITC: sc-516140 or m-IgGκ 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



OXR1 (A-4): sc-271707. Western blot analysis of OXR1 expression in HeLa (A) and NIH/3T3 (B) whole cell lysates.



OXR1 (A-4): sc-271707. Western blot analysis of OXR1 expression in non-transfected: sc-110760 (A) and human OXR1 transfected: sc-158793 (B) 293 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.

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