SANTA CRUZ BIOTECHNOLOGY, INC.

OXSR1 (SQ-39): sc-100361

BACKGROUND

Oxidative stress-responsive 1 protein (OXSR1), a protein of 527 amino acids, belongs to the STE20 subfamily. OXSR1 is one of two human homologs of Fray, a serine/threonine kinase expressed in *Drosophila*. OXSR1 binds to and phosphorylates p21-activated protein kinase (PAK1) and regulates downstream kinases in response to environmental stress. Endogenous OXSR1 is activated only by osmotic stresses, notably sorbitol and to a lesser extent NaCl. OXSR1 may also play a role in regulating the Actin cytoskeleton. The chloride channel proteins SLC12A1, SLC12A2 and SLC12A6 isoform 2 interact with OXSR1, but SLC12A4 and SLC12A7 do not. The WNK1 and WNK4 protein kinases activate OXSR1 by phosphorlating its T-loop. The OXSR1 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/

CHROMOSOMAL LOCATION

Genetic locus: OXSR1 (human) mapping to 3p22.2; Oxsr1 (mouse) mapping to 9 F3.

SOURCE

OXSR1 (SQ-39) is a mouse monoclonal antibody raised against recombinant OXSR1 of human origin.

PRODUCT

Each vial contains 100 µg IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

OXSR1 (SQ-39) is recommended for detection of OXSR1 of mouse, rat and human 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), immunohistochemistry (including paraffin-embedded sections) (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 OXSR1 siRNA (h): sc-61273, OXSR1 siRNA (m): sc-61274, OXSR1 shRNA Plasmid (h): sc-61273-SH, OXSR1 shRNA Plasmid (m): sc-61274-SH, OXSR1 shRNA (h) Lentiviral Particles: sc-61273-V and OXSR1 shRNA (m) Lentiviral Particles: sc-61274-V.

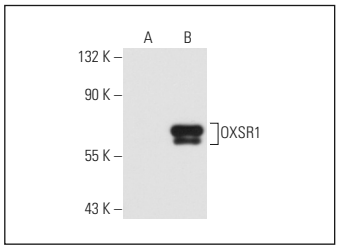
Molecular Weight of OXSR1: 58 kDa.

Positive Controls: OXSR1 (h): 293T Lysate: sc-171465, HeLa nuclear extract: sc-2120 or HeLa whole cell lysate: sc-2200.

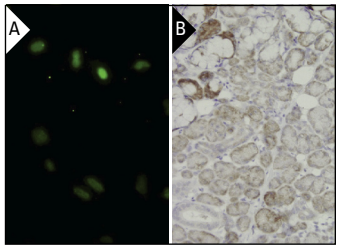
RECOMMENDED SUPPORT REAGENTS

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. 4) Immunohistochemistry: use m-IgGκ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



OXSR1 (SQ-39): sc-100361. Western blot analysis of OXSR1 expression in non-transfected: sc-117752 (**A**) and human OXSR1 transfected: sc-171465 (**B**) 293T whole cell lysates.



OXSR1 (SQ-39): sc-100361. Immunofluorescence staining of paraformaldehyde-fixed HeLa cells showing nuclear localization (**A**). Immunoperoxidase staining of formalin-fixed, paraffin-embedded human salivary gland tissue showing cytoplasmic localization (**B**).

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 for detailed protocols and support products.