SANTA CRUZ BIOTECHNOLOGY, INC.

OSR2 (H-40): sc-135277

BACKGROUND

OSR (odd-skipped related) proteins belong to the odd C_2H_2-type zinc-finger protein family and are involved in embryonic development and bone formation. OSR2 (odd-skipped related 2) is a 312 amino acid protein that contains 5 zinc-finger domains. It is expressed in the kidneys, skeletal muscle, testis and mouse embryos and may be involved in transcriptional activity and osteoblast function. The expression of OSR2 is regulated by C/EBP regulatory elements. OSR2 plays a role in regulating palatal development and expression of alkaline phosphatase. Two isoforms, OSR2A and OSR2B, are produced due to alternative splicing. OSR2B is 36 amino acids shorter than OSR2A and contains only 3 zinc-finger motifs. Both isoforms localize to the nucleus and are thought to exhibit opposite transcriptional activities. Mutations in the gene encoding OSR2 can alter the gene expression of Pax-9 and TGFβ3.

REFERENCES

1. Lan, Y., Kingsley, P.D., Cho, E.S. and Jiang, R. 2001. Osr2, a new mouse gene related to *Drosophila* odd-skipped, exhibits dynamic expression patterns during craniofacial, limb, and kidney development. Mech. Dev. 107: 175-179.
2. Debeer, P., de Ravel, T.J., Devriendt, K., Fryns, J.P., Huysmans, C. and Van de Ven, W.J. 2002. Human homologues of OSR1 and OSR2 are not involved in a syndrome with distal limb deficiencies, oral abnormalities, and renal defects. Am. J. Med. Genet. 111: 455-456.
3. Lan, Y., Ovitt, C.E., Cho, E.S., Maltby, K.M., Wang, Q. and Jiang, R. 2004. Odd-skipped related 2 (OSR2) encodes a key intrinsic regulator of secondary palate growth and morphogenesis. Development 131: 3207-3216.
4. Kawai, S., Kato, T., Inaba, H., Okahashi, N. and Amano, A. 2005. Odd-skipped related 2 splicing variants show opposite transcriptional activity. Biochem. Biophys. Res. Commun. 328: 306-311.
5. Kawai, S., Kato, T., Sato, M. and Amano, A. 2006. Odd-skipped related 2 gene transcription is regulated by CCAAT enhancer-binding protein δ in mesenchymal C3H/10T1/2 cells. Genes Cells 11: 163-175.

CHROMOSOMAL LOCATION

Genetic locus: OSR2 (human) mapping to 8q22.2; Osr2 (mouse) mapping to 15 B3.1.

SOURCE

OSR2 (H-40) is a rabbit polyclonal antibody raised against amino acids 81-120 mapping within an internal region of OSR2 of human origin.

PRODUCT

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

STORAGE

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

APPLICATIONS

OSR2 (H-40) is recommended for detection of OSR2 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

OSR2 (H-40) is also recommended for detection of OSR2 in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for OSR2 siRNA (h): sc-62723, OSR2 siRNA (m): sc-62724, OSR2 shRNA Plasmid (h): sc-62723-SH, OSR2 shRNA Plasmid (m): sc-62724-SH, OSR2 shRNA (h) Lentiviral Particles: sc-62723-V and OSR2 shRNA (m) Lentiviral Particles: sc-62724-V.

Molecular Weight of OSR2 isoforms: 36/31 kDa.

Positive Controls: HeLa nuclear extract: sc-2120.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 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 goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

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.