SANTA CRUZ BIOTECHNOLOGY, INC.

OSR2 (H-8): sc-393516

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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 five 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 three 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., et al. 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., et al. 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., et al. 2004. Odd-skipped related 2 (OSR2) encodes a key intrinsic regulator of secondary palate growth and morphogenesis. Development 131: 3207-3216.
4. Kawai, S., et al. 2005. Odd-skipped related 2 splicing variants show opposite transcriptional activity. Biochem. Biophys. Res. Commun. 328: 306-311.

CHROMOSOMAL LOCATION

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

SOURCE

OSR2 (H-8) is a mouse monoclonal antibody raised against amino acids 81-120 mapping within an internal region of OSR2 of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin. Also available as TransCruz reagent for Gel Supershift and ChIP applications, sc-393516 X, 200 µg/0.1 ml.

OSR2 (H-8) is available conjugated to agarose (sc-393516 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-393516 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-393516 PE), fluorescein (sc-393516 FITC), Alexa Fluor® 488 (sc-393516 AF488), Alexa Fluor® 546 (sc-393516 AF546), Alexa Fluor® 594 (sc-393516 AF594) or Alexa Fluor® 647 (sc-393516 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-393516 AF680) or Alexa Fluor® 790 (sc-393516 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

OSR2 (H-8) is recommended for detection of OSR2 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).

OSR2 (H-8) is also recommended for detection of OSR2 in additional species, including canine and porcine.

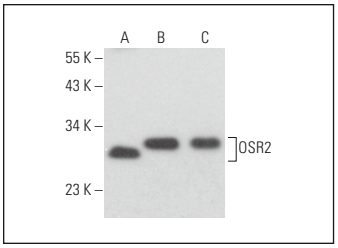
Suitable for use as control antibody for OSR2 siRNA (h): sc-62723, OSR2 siRNA (m): sc-62724, OSR2 shRNA Plasmid (h): sc-62723-SH, OSR2 shRNA Plasmid (m): sc-62724-SH, OSR2 shRNA (h) Lentiviral Particles: sc-62723-V and OSR2 shRNA (m) Lentiviral Particles: sc-62724-V.

OSR2 (H-8) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

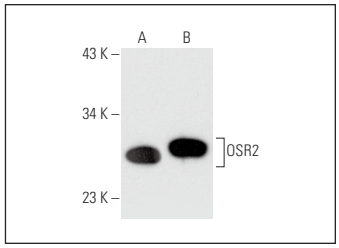
Molecular Weight of OSR2 isoforms: 36/31 kDa.

Positive Controls: HeLa nuclear extract: sc-2120, MCF7 whole cell lysate: sc-2206 or Jurkat whole cell lysate: sc-2204.

DATA



OSR2 (H-8): sc-393516. Western blot analysis of OSR2 expression in HeLa nuclear extract (**A**) and MCF7 (**B**) and A-431 (**C**) whole cell lysates.



OSR2 (H-8): sc-393516. Western blot analysis of OSR2 expression in HeLa nuclear extract (**A**) and Jurkat whole cell lysate (**B**).

SELECT PRODUCT CITATIONS

1. Shi, L., et al. 2019. Mouse embryonic palatal mesenchymal cells maintain stemness through the PTEN-Akt-mTOR autophagic pathway. Stem Cell Res. Ther. 10: 217.
2. Nagasaka, A., et al. 2022. Spatiotemporal gene expression regions along the anterior-posterior axis in mouse embryos before and after palatal elevation. Int. Mol. Sci. 23: 5160.

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.