SANTA CRUZ BIOTECHNOLOGY, INC.

SDR-O (K-13): sc-169270

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

SDR-O (orphan short-chain dehydrogenase/reductase), also known as SDR9C7 (short chain dehydrogenase/reductase family 9C, member 7) or RDHS, is a 313 amino acid cytoplasmic protein that is highly expressed in liver. While SDR-O shares homology with members of the SDR family, it does not possess retinoid or dehydrogenase activity. Instead, SDR-O has been hypothesized to either act as a regulatory factor, catalyze the metabolism of nuclear receptor ligands, or bind substrates to influence metabolism. The gene encoding SDR-O maps to human chromosome 12, which encodes over 1,100 genes and comprises approximately 4.5% of the human genome. Chromosome 12 is associated with a variety of diseases and afflictions, including hypochondrogenesis, achondrogenesis, Kniest dysplasia, Noonan syndrome and trisomy 12p, which causes facial developmental defects and seizure disorders.

REFERENCES

1. Delgado Carrasco, J., et al. 2001. Achondrogenesis type II-hypochondrogenesis: radiological features. Case report. An. Esp. Pediatr. 55: 553-557.
2. Chen, W., et al. 2002. SDR-O: an orphan short-chain dehydrogenase/reductase localized at mouse chromosome 10/human chromosome 12. Gene 294: 141-146.
3. Yokoyama, T., et al. 2003. A case of Kniest dysplasia with retinal detachment and the mutation analysis. Am. J. Ophthalmol. 136: 1186-1188.
4. Online Mendelian Inheritance in Man, OMIM™. 2005. Johns Hopkins University, Baltimore, MD. MIM Number: 609769. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
5. Forzano, F., et al. 2007. A familial case of achondrogenesis type II caused by a dominant COL2A1 mutation and "patchy" expression in the mosaic father. Am. J. Med. Genet. A 143A: 2815-2820.
6. Persson, B., et al. 2009. The SDR (short-chain dehydrogenase/reductase and related enzymes) nomenclature initiative. Chem. Biol. Interact. 178: 94-98.
7. Lo, F.S., et al. 2009. High resolution melting analysis for mutation detection for PTPN11 gene: applications of this method for diagnosis of Noonan syndrome. Clin. Chim. Acta 409: 75-77.
8. Benussi, D.G., et al. 2009. Trisomy 12p and monosomy 4p: phenotype-genotype correlation. Genet. Test Mol. Biomarkers 13: 199-204.

CHROMOSOMAL LOCATION

Genetic locus: SDR9C7 (human) mapping to 12q13.3; Sdr9c7 (mouse) mapping to 10 D3.

SOURCE

SDR-O (K-13) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of SDR-O of human origin.

STORAGE

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

PRODUCT

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

Blocking peptide available for competition studies, sc-169270 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

SDR-O (K-13) is recommended for detection of SDR-O of 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).

Suitable for use as control antibody for SDR-O siRNA (h): sc-95890, SDR-O shRNA Plasmid (h): sc-95890-SH and SDR-O shRNA (h) Lentiviral Particles: sc-95890-V.

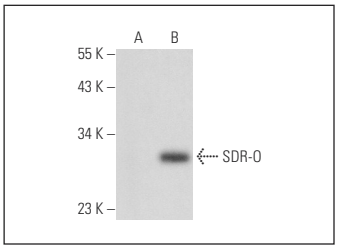
Molecular Weight of SDR-O: 35 kDa.

Positive Controls: Hep G2 cell lysate: sc-2227 or HeLa whole cell lysate: sc-2200.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (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 donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



SDR-O (K-13): sc-169270. Western blot analysis of SDR-O expression in non-transfected: sc-117752 (**A**) and mouse SDR-O transfected: sc-123410 (**B**) 293T whole cell lysates.

RESEARCH USE

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