SANTA CRUZ BIOTECHNOLOGY, INC.

DHRS4 (G-13): sc-131491



BACKGROUND

DHRS4 (dehydrogenase/reductase (SDR family) member 4), also known as PSCD (peroxisomal short-chain alcohol dehydrogenase), PHCR (NADPH-dependent carbonyl reductase/NADP-retinol dehydrogenase), SDR-SRL, NRDR (NADPH-dependent retinol dehydrogenase/reductase) or SCAD-SRL, is a 260 amino acid peroxisomal homotetramer belonging to the short-chain dehydrogenases/reductases (SDR) family. DHRS4 reduces all-*trans*-retinal, 9-*cis* retinal, alkyl phenyl ketones and α -dicarbonyl compounds with aromatic rings, and exists as seven alternatively spliced isoforms. DHRS4 isoform 1 is expressed in normal cervix, whereas isoforms 4, 5 and 6 have been is found in neoplastic cervical tissues but not normal cervix. The gene encoding DHRS4 maps to human chromosome 14q11.2 and mouse chromosome 14 C3.

REFERENCES

- Fransen, M., et al. 1999. Identification of peroxisomal proteins by using M13 phage protein VI phage display: molecular evidence that mammalian peroxisomes contain a 2,4-dienoyl-CoA reductase. Biochem. J. 340: 561-568.
- Du, J., et al. 2004. CDNA cloning of a short isoform of human liver NADP (H) -dependent retinol dehydrogenase/reductase and analysis of its characteristics. Yi Chuan Xue Bao 31: 661-667.
- Song, X.H., et al. 2007. Expression of a novel alternatively spliced variant of NADP(H)-dependent retinol dehydrogenase/reductase with deletion of exon 3 in cervical squamous carcinoma. Int. J. Cancer 120: 1618-1626.
- Matsunaga, T., et al. 2008. Characterization of human DHRS4: an inducible short-chain dehydrogenase/reductase enzyme with 3β-hydroxysteroid dehydrogenase activity. Arch. Biochem. Biophys. 477: 339-347.
- 5. Online Mendelian Inheritance in Man, OMIM™. 2008. Johns Hopkins University, Baltimore, MD. MIM Number: 611596. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
- Zhang, Q., et al. 2009. Alternative transcription initiation and splicing variants of the DHRS4 gene cluster. Biosci. Rep. 29: 47-56.
- Persson, B., et al. 2009. The SDR (short-chain dehydrogenase/reductase and related enzymes) nomenclature initiative. Chem. Biol. Interact. 178: 94-98.

CHROMOSOMAL LOCATION

Genetic locus: Dhrs4 (mouse) mapping to 14 C3.

SOURCE

DHRS4 (G-13) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of DHRS4 of mouse origin.

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-131491 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

DHRS4 (G-13) is recommended for detection of DHRS4 of mouse and rat origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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); non cross-reactive with other DHRS family members.

Suitable for use as control antibody for DHRS4 siRNA (m): sc-143031, DHRS4 shRNA Plasmid (m): sc-143031-SH and DHRS4 shRNA (m) Lentiviral Particles: sc-143031-V.

Molecular Weight of DHRS4: 28 kDa.

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) Immunofluo-rescence: 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.

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 or our catalog for detailed protocols and support products.