

# DHRS2 (M-84): sc-292127

## BACKGROUND

DHRS2 (dehydrogenase/reductase (SDR family) member 2), also known as SDR25C1 or HEP27, is a 258 amino acid protein that localizes to the nucleus and belongs to the short-chain dehydrogenase/reductase (SDR) family. Functioning as an NADPH-dependent dicarbonyl reductase, DHRS2 is thought to inhibit cell replication by either converting cortisone in cortisol, or by catalyzing the oxidation of androgen and estrogen. The gene encoding DHRS2 maps to human chromosome 14, which houses over 700 genes and comprises nearly 3.5% of the human genome. Chromosome 14 encodes the presenilin 1 (PSEN1) gene, which is one of the three key genes associated with the development of Alzheimer's disease (AD). The SERPINA1 gene is also located on chromosome 14 and, when defective, leads to the genetic disorder  $\alpha$ 1-antitrypsin deficiency, which is characterized by severe lung complications and liver dysfunction.

## REFERENCES

1. Donadel, G., et al. 1991. Identification of a novel nuclear protein synthesized in growth-arrested human hepatoblastoma Hep G2 cells. *Eur. J. Biochem.* 195: 723-729.
2. Gabrielli, F., et al. 1995. A nuclear protein, synthesized in growth-arrested human hepatoblastoma cells, is a novel member of the short-chain alcohol dehydrogenase family. *Eur. J. Biochem.* 232: 473-477.
3. Pellegrini, S., et al. 2002. A human short-chain dehydrogenase/reductase gene: structure, chromosomal localization, tissue expression and subcellular localization of its product. *Biochim. Biophys. Acta* 1574: 215-222.
4. Heinz, S., et al. 2002. Genomic organization of the human gene HEP27: alternative promoter usage in Hep G2 cells and monocyte-derived dendritic cells. *Genomics* 79: 608-615.
5. Shafqat, N., et al. 2006. Hep27, a member of the short-chain dehydrogenase/reductase family, is an NADPH-dependent dicarbonyl reductase expressed in vascular endothelial tissue. *Cell. Mol. Life Sci.* 63: 1205-1213.
6. 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: DhRS2 (mouse) mapping to 14 C3.

## SOURCE

DHRS2 (M-84) is a rabbit polyclonal antibody raised against amino acids 108-191 mapping within an internal region of DHRS2 of mouse origin.

## PRODUCT

Each vial contains 200  $\mu$ g 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

DHRS2 (M-84) is recommended for detection of DHRS2 of mouse and rat origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g 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); non cross-reactive with other DHRS family members.

DHRS2 (M-84) is also recommended for detection of DHRS2 in additional species, including equine and canine.

Suitable for use as control antibody for DHRS2 siRNA (m): sc-143030, DHRS2 shRNA Plasmid (m): sc-143030-SH and DHRS2 shRNA (m) Lentiviral Particles: sc-143030-V.

Molecular Weight of DHRS2: 28 kDa.

## 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](http://www.scbt.com) or our catalog for detailed protocols and support products.