

RDH13 (V-14): sc-131060

BACKGROUND

RDH13 (retinol dehydrogenase 13), also known as *all-trans* and *9-cis* retinol dehydrogenase 13 or SDR7C3, is a 331 amino acid mitochondrial protein belonging to the short-chain dehydrogenases/reductases (SDR) family. Widely expressed, mostly in eye, pancreas, placenta and lung, RDH13 localizes on the outer side of the inner mitochondrial membrane. Related to microsomal retinoid oxidoreductase RDH11, RDH13 is considered to be a major enzyme among the RDH family of proteins. Catalytically active, RDH13 recognizes retinoids as substrates and may function in retinoic acid production. RDH13 may function to protect the mitochondria against oxidative stress. Leber congenital amaurosis (LCA) type 3, an inherited autosomal recessive retinal disease, has been associated with defects of RDH13. LCA represents the most common genetic cause of congenital visual impairment in infants and children.

REFERENCES

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- Kasus-Jacobi, A., et al. 2005. Functional characterization of mouse RDH11 as a retinol dehydrogenase involved in dark adaptation *in vivo*. *J. Biol. Chem.* 280: 20413-20420.
- Zyer, S., et al. 2006. Microarray-based mutation detection and phenotypic characterization of patients with Leber congenital amaurosis. *Invest. Ophthalmol. Vis. Sci.* 47: 1167-1176.
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CHROMOSOMAL LOCATION

Genetic locus: RDH13 (human) mapping to 19q13.42; Rdh13 (mouse) mapping to 7 A1.

SOURCE

RDH13 (V-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of RDH13 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.

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.

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-131060 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

RDH13 (V-14) is recommended for detection of RDH13 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); non cross-reactive with other RDH family members.

RDH13 (V-14) is also recommended for detection of RDH13 in additional species, including equine, canine and bovine.

Suitable for use as control antibody for RDH13 siRNA (h): sc-97134, RDH13 siRNA (m): sc-152778, RDH13 shRNA Plasmid (h): sc-97134-SH, RDH13 shRNA Plasmid (m): sc-152778-SH, RDH13 shRNA (h) Lentiviral Particles: sc-97134-V and RDH13 shRNA (m) Lentiviral Particles: sc-152778-V.

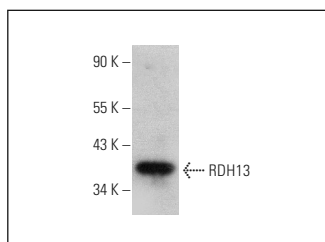
Molecular Weight of RDH13: 36 kDa.

Positive Controls: human liver extract: sc-363766.

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



RDH13 (V-14): sc-131060. Western blot analysis of RDH13 expression in human liver tissue extract.

RESEARCH USE

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