

RDH8 (T-15): sc-240817

BACKGROUND

RDH8 (retinol dehydrogenase 8), also known as PRRDH (photoreceptor outer segment all-*trans* retinol dehydrogenase), is a 311 amino acid multi-pass membrane protein that belongs to the short-chain dehydrogenase/reductase (SDR) family of enzymes that catalyze the first step in the generation of retinaldehyde from retinol. Expressed in the outer segments of retinal photoreceptor cells, RDH8 functions as a retinol dehydrogenase that uses NADP to catalyze the conversion of *trans*-retinal to *trans*-retinol, a key rate-limiting step in the regeneration of rhodopsin. The gene encoding RDH8 maps to human chromosome 19, which consists of over 63 million bases, houses approximately 1,400 genes and is recognized for having the greatest gene density of the human chromosomes. It is the genetic home for a number of immunoglobulin (Ig) superfamily members, including the killer cell and leukocyte Ig-like receptors, a number of ICAMs, the CEACAM and PSG family and Fc receptors (FcRs).

REFERENCES

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3. Rando, R.R. 2001. The biochemistry of the visual cycle. *Chem. Rev.* 101: 1881-1896.
4. Perrault, I., et al. 2004. Retinal dehydrogenase 12 (RDH12) mutations in leber congenital amaurosis. *Am. J. Hum. Genet.* 75: 639-646.
5. Han, W., et al. 2004. Using denaturing HPLC for SNP discovery and genotyping, and establishing the linkage disequilibrium pattern for the all-*trans*-retinol dehydrogenase (RDH8) gene. *J. Hum. Genet.* 49: 16-23.
6. Online Mendelian Inheritance in Man, OMIM[™]. 2004. Johns Hopkins University, Baltimore, MD. MIM Number: 608575. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
7. Maeda, A., et al. 2005. Role of photoreceptor-specific retinol dehydrogenase in the retinoid cycle *in vivo*. *J. Biol. Chem.* 280: 18822-18832.

CHROMOSOMAL LOCATION

Genetic locus: RDH8 (human) mapping to 19p13.2; Rdh8 (mouse) mapping to 9 A3.

SOURCE

RDH8 (T-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of RDH8 of human 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-240817 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

RDH8 (T-15) is recommended for detection of RDH8 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.

RDH8 (T-15) is also recommended for detection of RDH8 in additional species, including canine, bovine and porcine.

Suitable for use as control antibody for RDH8 siRNA (h): sc-97854, RDH8 siRNA (m): sc-152783, RDH8 shRNA Plasmid (h): sc-97854-SH, RDH8 shRNA Plasmid (m): sc-152783-SH, RDH8 shRNA (h) Lentiviral Particles: sc-97854-V and RDH8 shRNA (m) Lentiviral Particles: sc-152783-V.

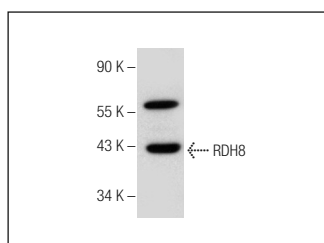
Molecular Weight of RDH8: 40 kDa.

Positive Controls: Human liver tissue extract.

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



RDH8 (T-15): sc-240817. Western blot analysis of RDH8 expression in human liver tissue extract.

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.