

# RDHE2 (A-14): sc-87388

## BACKGROUND

RDHE2 (epidermal retinal dehydrogenase 2), also known as EPHD-2 or retSDR2 (retinal short chain dehydrogenase reductase 2), is a member of the short-chain dehydrogenase/reductase (SDR) family of enzymes that catalyze the first step in the generation of retinaldehyde from retinol. Expressed ubiquitously at low levels with predominant expression in fetal and adult lung, fetal kidney and fetal skin, RDHE2 localizes to the membrane and is a multi-pass membrane protein. RDHE2 contains three motifs that are conserved in most of the SDR family members: a TGXXGXG motif, a YXXXK motif (the active-site) and an LXNNAG motif. This implies that, similar to other SDR family members, RDHE2 may be involved in the retinol metabolism pathway. In addition, RDHE2 may play a role in the pathogenesis of psoriasis vulgaris, a chronic inflammatory skin disease. This is suggested by the significant upregulation of RDHE2 mRNA levels in the affected skin of psoriasis patients.

## REFERENCES

1. Matsuzaka, Y., et al. 2002. Identification of the hRDHE2 gene, a novel member of the SDR family, and its increased expression in psoriatic lesion. *Biochem. Biophys. Res. Commun.* 297: 1171-1180.
2. Chai, Z., et al. 2003. 17  $\beta$ -hydroxysteroid dehydrogenase type XI localizes to human steroidogenic cells. *Endocrinology* 144: 2084-2091.
3. Markova, N.G., et al. 2003. Expression pattern and biochemical characteristics of a major epidermal retinol dehydrogenase. *Mol. Genet. Metab.* 78: 119-135.
4. Matsuzaka, Y., et al. 2004. hRDHE2 gene polymorphisms, variable transcriptional start sites, and psoriasis. *Mamm. Genome* 15: 668-675.
5. Online Mendelian Inheritance in Man, OMIM™. 2004. Johns Hopkins University, Baltimore, MD. MIM Number: 608989. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>

## CHROMOSOMAL LOCATION

Genetic locus: SDR16C5 (human) mapping to 8q12.1; Sdr16c5 (mouse) mapping to 4 A1.

## SOURCE

RDHE2 (A-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of RDHE2 of human origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-87388 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## STORAGE

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

## APPLICATIONS

RDHE2 (A-14) is recommended for detection of RDHE2 of mouse and human 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).

RDHE2 (A-14) is also recommended for detection of RDHE2 in additional species, including canine and bovine.

Suitable for use as control antibody for RDHE2 siRNA (h): sc-77583, RDHE2 siRNA (m): sc-152785, RDHE2 shRNA Plasmid (h): sc-77583-SH, RDHE2 shRNA Plasmid (m): sc-152785-SH, RDHE2 shRNA (h) Lentiviral Particles: sc-77583-V and RDHE2 shRNA (m) Lentiviral Particles: sc-152785-V.

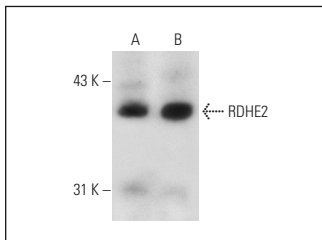
Molecular Weight of RDHE2: 34 kDa.

Positive Controls: HeLa nuclear extract: sc-2120, HeLa whole cell lysate: sc-2200 or SHP-77 whole cell lysate: sc-364258.

## 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



RDHE2 (A-14): sc-87388. Western blot analysis of RDHE2 expression in HeLa (A) and SHP-77 (B) whole cell lysates.

## 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.