SANTA CRUZ BIOTECHNOLOGY, INC.

# RDH5 (G-5): sc-377057

SANTA CRUZ BIOTECHNOLOGY

*The Power to Question*

## BACKGROUND

Retinol dehydrogenase 5 (RDH5), also known as 11-*cis* retinol dehydrogenase (11-*cis* RDH) or RDH1, is a 318 amino acid protein belonging to the short-chain dehydrogenases/reductases (SDR) family. Highly expressed in the retinal pigment epithelium and localized to the membrane, RDH5 catalyzes the final step in the biosynthesis of 11-*cis* retinal (11-*cis* retinaldehyde), the universal chromophore of visual pigment, from all-*trans* retinol (vitamin A). RDH5 has been shown to be active in the presence of NAD as a cofactor, but not in the presence of NADP. Mutations in the gene encoding RDH5 lead to fundus albipunctatus (FA), a rare form of stationary night blindness characterized by delay in the regeneration of cone and rod photopigments.

## REFERENCES


1. Yamamoto, H., et al. 1999. Mutations in the gene encoding 11-*cis* retinol dehydrogenase cause delayed dark adaptation and fundus albipunctatus. Nat. Genet. 22: 188-191.
2. Online Mendelian Inheritance in Man, OMIM™. 2004. Johns Hopkins University, Baltimore, MD. MIM Number: 601617. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
3. Hayashi, T., et al. 2006. Compound heterozygous RDH5 mutations in familial fleck retina with night blindness. Acta Ophthalmol. Scand. 84: 254-258.
4. Maeda, A., et al. 2006. Aberrant metabolites in mouse models of congenital blinding diseases: formation and storage of retinyl esters. Biochemistry 45: 4210-4219.
5. Maeda, A., et al. 2006. Improvement in rod and cone function in mouse model of fundus albipunctatus after pharmacologic treatment with 9-*cis*-retinal. Invest. Ophthalmol. Vis. Sci. 47: 4540-4546.
6. Humbert, G., et al. 2006. Homozygous deletion related to Alu repeats in RLBP1 causes retinitis punctata albescens. Invest. Ophthalmol. Vis. Sci. 47: 4719-4724.


## CHROMOSOMAL LOCATION

Genetic locus: RDH5 (human) mapping to 12q13.2.

## SOURCE

RDH5 (G-5) is a mouse monoclonal antibody raised against amino acids 111-150 mapping within an internal region of RDH5 of human origin.

## PRODUCT

Each vial contains 200 µg $IgG_1$ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

RDH5 (G-5) is available conjugated to agarose (sc-377057 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-377057 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-377057 PE), fluorescein (sc-377057 FITC), Alexa Fluor® 488 (sc-377057 AF488), Alexa Fluor® 546 (sc-377057 AF546), Alexa Fluor® 594 (sc-377057 AF594) or Alexa Fluor® 647 (sc-377057 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-377057 AF680) or Alexa Fluor® 790 (sc-377057 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

## APPLICATIONS

RDH5 (G-5) is recommended for detection of RDH5 of human origin by Western Blotting (starting dilution 1:100, 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).

Suitable for use as control antibody for RDH5 siRNA (h): sc-76380, RDH5 shRNA Plasmid (h): sc-76380-SH and RDH5 shRNA (h) Lentiviral Particles: sc-76380-V.

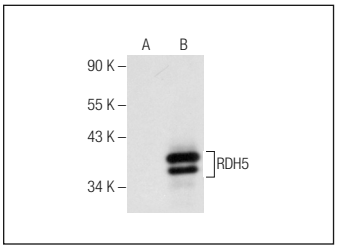
Molecular Weight of RDH5: 35 kDa.

Positive Controls: RDH5 (h): 293T Lysate: sc-158923.

## RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 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 m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

## DATA




RDH5 (G-5): sc-377057. Western blot analysis of RDH5 expression in non-transfected: sc-117752 (**A**) and human RDH5 transfected: sc-158923 (**B**) 293T whole cell lysates.

## 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 for detailed protocols and support products.