SANTA CRUZ BIOTECHNOLOGY, INC.

RD3 (T-14): sc-160716

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Leber congenital amaurosis (LCA) is one of the most common causes of hereditary blindness or severe visual impairment in infants. Mutations in several genes with diverse functions mapping to two loci have been implicated in LCA causation. These proteins are involved in processes such as photoreceptor development and maintenance, phototransduction, vitamin A metabolism and protein trafficking. RD3 (retinal degeneration 3), also known as LCA12, is a 195 amino acid protein expressed in retina. RD3 is suggested to be part of the subnuclear protein complexes involved in diverse processes, such as transcription and splicing. Defects in the gene encoding RD3 are the cause of Leber congenital amaurosis type 12. Infants affected with Leber congenital amaurosis type 12 have little or no retinal photoreceptor function.

REFERENCES

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3. Friedman, J.S., Chang, B., Kannabiran, C., Chakarova, C., Singh, H.P., Jalali, S., Hawes, N.L., Branham, K., Othman, M., Filippova, E., Thompson, D.A., Webster, A.R., Andreasson, S., Jacobson, S.G., Bhattacharya, S.S., et al. 2006. Premature truncation of a novel protein, RD3, exhibiting subnuclear localization is associated with retinal degeneration. Am. J. Hum. Genet. 79: 1059-1070.
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CHROMOSOMAL LOCATION

Genetic locus: RD3 (human) mapping to 1q32.3; Rd3 (mouse) mapping to 1 H6.

SOURCE

RD3 (T-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of RD3 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-160716 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

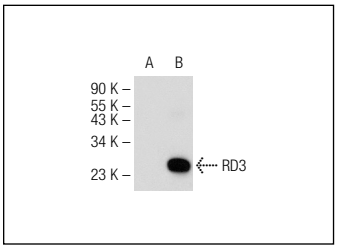
RD3 (T-14) is recommended for detection of RD3 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for RD3 siRNA (h): sc-88397, RD3 siRNA (m): sc-152776, RD3 shRNA Plasmid (h): sc-88397-SH, RD3 shRNA Plasmid (m): sc-152776-SH, RD3 shRNA (h) Lentiviral Particles: sc-88397-V and RD3 shRNA (m) Lentiviral Particles: sc-152776-V.

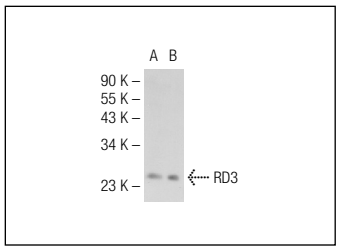
Molecular Weight of RD3: 23 kDa.

Positive Controls: Y79 cell lysate: sc-2240, Y79 nuclear extract: sc-2126 or RD3 (h): 293T Lysate: sc-117023.

DATA



RD3 (T-14): sc-160716. Western blot analysis of RD3 expression in non-transfected: sc-117752 (**A**) and human RD3 transfected: sc-117023 (**B**) 293T whole cell lysates.



RD3 (T-14): sc-160716. Western blot analysis of RD3 expression in Y79 whole cell lysate (**A**) and Y79 nuclear extract (**B**).

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.

MONOS Satisfaction Guaranteed

Try **RD3 (D-11): sc-514692** or **RD3 (A-9): sc-390653**, our highly recommended monoclonal alternatives to RD3 (T-14).