

# RDS (N-19): sc-18946

## BACKGROUND

Retinal degeneration slow (RDS) is a mouse neurological mutation that is characterized phenotypically by abnormal development of rod and cone photoreceptors followed by their slow degeneration. This phenotype resembles the pathologic abnormalities seen in retinitis pigmentosa. Mouse RDS is due to a defect in a specific retinal protein which is photoreceptor-specific and is homologous in several respects to the rod outer segment protein-1. The human RDS protein is 92% homologous to its murine analog. The RDS protein is a membrane-associated glycoprotein restricted to photoreceptor outer segment discs and may function as an adhesion molecule involved in stabilization and compaction of outer segment discs. The association of the RDS gene with a degenerative retinopathy in mice makes it an important candidate gene for human retinopathies. The gene which encodes RDS maps to human chromosome 6p21.1.

## REFERENCES

1. Travis, G.H., et al. 1989. Identification of a photoreceptor-specific mRNA encoded by the gene responsible for retinal degeneration slow (RDS). *Nature* 338: 70-73.
2. Dryja, T.P., et al. 1989. Isolation of human retinal cDNA fragments homologous to the murine RDS gene transcript. *Invest. Ophthalmol. Vis. Sci.* 30: 43.
3. Travis, G.H., et al. 1991. The human retinal degeneration slow (RDS) gene: chromosome assignment and structure of the mRNA. *Genomics* 10: 733-739.
4. Felbor, U., et al. 1997. Adult vitelliform macular dystrophy is frequently associated with mutations in the peripherin/RDS gene. *Hum. Mutat.* 10: 301-309.
5. Ali, R.R., et al. 2000. Restoration of photoreceptor ultrastructure and function in retinal degeneration slow mice by gene therapy. *Nat. Genet.* 25: 306-310.

## CHROMOSOMAL LOCATION

Genetic locus: PRPH2 (human) mapping to 6p21.1; Prph2 (mouse) mapping to 17 C.

## SOURCE

RDS (N-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of RDS 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-18946 P, (100 µg 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

RDS (N-19) is recommended for detection of RDS 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).

RDS (N-19) is also recommended for detection of RDS in additional species, including equine, bovine, porcine and feline.

Suitable for use as control antibody for RDS siRNA (h): sc-40903, RDS siRNA (m): sc-40904, RDS shRNA Plasmid (h): sc-40903-SH, RDS shRNA Plasmid (m): sc-40904-SH, RDS shRNA (h) Lentiviral Particles: sc-40903-V and RDS shRNA (m) Lentiviral Particles: sc-40904-V.

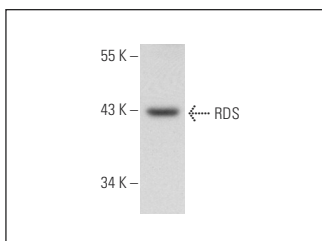
Molecular Weight of RDS: 39 kDa.

Positive Controls: rat eye extract: sc-364805 or mouse eye extract: sc-364241.

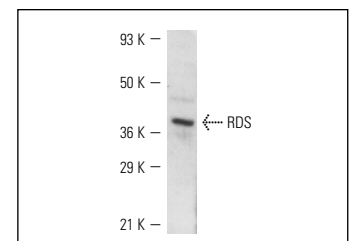
## RECOMMENDED SECONDARY REAGENTS

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



RDS (N-19): sc-18946. Western blot analysis of RDS expression in 293T whole cell lysate.



RDS (N-19): sc-18946. Western blot analysis of RDS expression in rat eye extract.

## RESEARCH USE

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

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Try **RDS (E-5): sc-390278**, our highly recommended monoclonal alternative to RDS (N-19).