

RDS (E-5): sc-390278

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.

CHROMOSOMAL LOCATION

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

SOURCE

RDS (E-5) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 37-75 near the N-terminus of RDS of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2b} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

RDS (E-5) is available conjugated to agarose (sc-390278 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-390278 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-390278 PE), fluorescein (sc-390278 FITC), Alexa Fluor® 488 (sc-390278 AF488), Alexa Fluor® 546 (sc-390278 AF546), Alexa Fluor® 594 (sc-390278 AF594) or Alexa Fluor® 647 (sc-390278 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-390278 AF680) or Alexa Fluor® 790 (sc-390278 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-390278 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

APPLICATIONS

RDS (E-5) is recommended for detection of RDS of mouse, rat and 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).

RDS (E-5) is also recommended for detection of RDS in additional species, including bovine.

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.

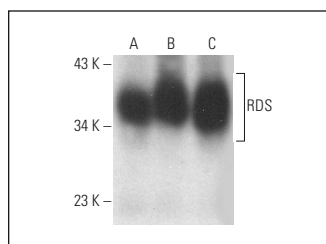
Molecular Weight of RDS: 39 kDa.

Positive Controls: RDS (m2): 293T Lysate: sc-123051, rat eye extract: sc-364805 or mouse eye extract: sc-364241.

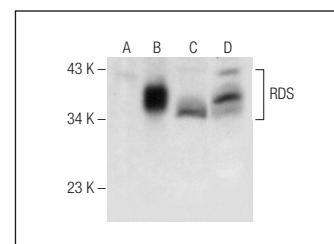
RECOMMENDED SUPPORT REAGENTS

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



RDS (E-5): sc-390278. Western blot analysis of RDS expression in rat eye (A), human eye (B) and mouse eye (C) tissue extracts.



RDS (E-5): sc-390278. Western blot analysis of RDS expression in non-transfected: sc-117752 (A) and mouse RDS transfected: sc-123051 (B) 293T whole cell lysates and rat eye (C) and mouse eye (D) tissue extracts.

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.

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