

RPE65 (H-85): sc-32893

BACKGROUND

The retinal pigment epithelium (RPE) is a monolayer simple epithelium in proximity to the outer surface of the retinal photoreceptor cells. Retinal pigment epithelium-specific protein (RPE65) is a 65 kDa protein belonging to the β -carotene dioxygenase family. This protein is important in 11-*cis* retinal production as well as in visual pigment regeneration. RPE65 is attached to the membrane by a lipid anchor when palmitoylated (membrane form) and soluble when unpalmitoylated. The soluble form of the protein binds vitamin A. Defects in RPE65 causes autosomal dominant retinitis pigmentosa and/or Leber congenital amaurosis type 2.

REFERENCES

- Hamel, C.P., et al. 1993. Molecular cloning and expression of RPE65, a novel retinal pigment epithelium-specific microsomal protein that is post-transcriptionally regulated *in vitro*. *J. Biol. Chem.* 268: 15751-15757.
- Hamel, C.P., et al. 1994. The gene for the retinal pigment epithelium-specific protein RPE65 is localized to human 1p31 and mouse 3. *Genomics* 20: 509-512.
- Morimura, H., et al. 1998. Mutations in the RPE65 gene in patients with autosomal recessive retinitis pigmentosa or Leber congenital amaurosis. *Proc. Natl. Acad. Sci. USA* 95: 3088-3093.

CHROMOSOMAL LOCATION

Genetic locus: RPE65 (human) mapping to 1p31.3; Rpe65 (mouse) mapping to 3 H4.

SOURCE

RPE65 (H-85) is a rabbit polyclonal antibody raised against amino acids 256-340 mapping within an internal region of RPE65 of human origin.

PRODUCT

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

APPLICATIONS

RPE65 (H-85) is recommended for detection of RPE65 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ 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). RPE65 (H-85) is also recommended for detection of RPE65 in additional species, including equine, canine, bovine, porcine and avian. Suitable for use as control antibody for RPE65 siRNA (h): sc-44898, RPE65 siRNA (m): sc-44899, RPE65 shRNA Plasmid (h): sc-44898-SH, RPE65 shRNA Plasmid (m): sc-44899-SH, RPE65 shRNA (h) Lentiviral Particles: sc-44898-V and RPE65 shRNA (m) Lentiviral Particles: sc-44899-V.

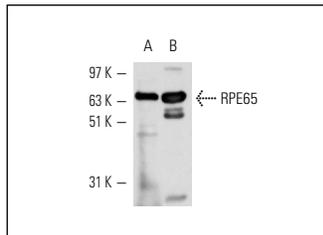
Molecular Weight of RPE65: 65 kDa.

Positive Controls: mouse eye extract: sc-364241 or human eye extract: sc-364223.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker[™] compatible goat anti-rabbit IgG-HRP: sc-2030 (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 goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz[™] Mounting Medium: sc-24941.

DATA



RPE65 (H-85): sc-32893. Western blot analysis of RPE65 expression in mouse eye (A) and human eye (B) tissue extracts.

SELECT PRODUCT CITATIONS

- Huang, C., et al. 2012. Combination of retinal pigment epithelium cell-conditioned medium and photoreceptor outer segments stimulate mesenchymal stem cell differentiation toward a functional retinal pigment epithelium cell phenotype. *J. Cell. Biochem.* 113: 590-598.

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.



Try **RPE65 (E-5): sc-390787** or **RPE65 (8B11): sc-53489**, our highly recommended monoclonal alternatives to RPE65 (H-85).