SANTA CRUZ BIOTECHNOLOGY, INC.

RPE65 (C-15): sc-33294

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

1. 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.
2. 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.

CHROMOSOMAL LOCATION

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

SOURCE

RPE65 (C-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of RPE65 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-33294 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

RPE65 (C-15) 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 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).

RPE65 (C-15) is also recommended for detection of RPE65 in additional species, including 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.

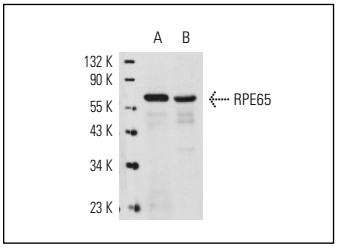
Molecular Weight of RPE65: 65 kDa.

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 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



RPE65 (C-15): sc-33294. Western blot analysis of RPE65 expression in mouse eye (**A**) and human eye (**B**) 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.

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.