

Product datasheet

Anti-RPE65 antibody ab235950

2 Images

Overview

Product name	Anti-RPE65 antibody
Description	Rabbit polyclonal to RPE65
Host species	Rabbit
Tested applications	Suitable for: WB, ICC/IF
Species reactivity	Reacts with: Rat, Human Predicted to work with: Cow, Dog, African green monkey 
Immunogen	Recombinant fragment corresponding to Human RPE65 aa 348-484. Sequence: ENWEEVKKNARKAPQPEVRRYVLPNIDKADTGKNLVTLPNTTATAILCS DETWLEPEVLFSGPRQAFQINYPQYKYGKPYTYAYGLGLNHFVPDRL CKLNVKTKETWWWQEPDSEPIFVSHPDAL EEDDG Database link: Q16518  Run BLAST with  Run BLAST with
Positive control	WB: Rat brain tissue lysate. ICC/IF: HeLa cells.
General notes	<p>Reproducibility is key to advancing scientific discovery and accelerating scientists' next breakthrough.</p> <p>Abcam is leading the way with our range of recombinant antibodies, knockout-validated antibodies and knockout cell lines, all of which support improved reproducibility.</p> <p>We are also planning to innovate the way in which we present recommended applications and species on our product datasheets, so that only applications & species that have been tested in our own labs, our suppliers or by selected trusted collaborators are covered by our Abpromise™ guarantee.</p> <p>In preparation for this, we have started to update the applications & species that this product is Abpromise guaranteed for.</p> <p>We are also updating the applications & species that this product has been “predicted to work with,” however this information is not covered by our Abpromise guarantee.</p> <p>Applications & species from publications and Abreviews that have not been tested in our own labs or in those of our suppliers are not covered by the Abpromise guarantee.</p> <p>Please check that this product meets your needs before purchasing. If you have any questions,</p>

special requirements or concerns, please send us an inquiry and/or contact our Support team ahead of purchase. Recommended alternatives for this product can be found below, as well as customer reviews and Q&As.

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C long term. Avoid freeze / thaw cycle.
Storage buffer	pH: 7.40 Constituents: PBS, 50% Glycerol (glycerin, glycerine), 0.03% Proclin 300
Purity	Protein G purified
Purification notes	Purity >95%.
Clonality	Polyclonal
Isotype	IgG

Applications

Our [Abpromise guarantee](#) covers the use of **ab235950** in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
WB		1/500 - 1/5000.
ICC/IF		1/50 - 1/200.

Target

Function	Plays important roles in the production of 11-cis retinal and in visual pigment regeneration. The soluble form binds vitamin A (all-trans-retinol), making it available for LRAT processing to all-trans-retinyl ester. The membrane form, palmitoylated by LRAT, binds all-trans-retinyl esters, making them available for IMH (isomerohydrolase) processing to all-cis-retinol. The soluble form is regenerated by transferring its palmitoyl groups onto 11-cis-retinol, a reaction catalyzed by LRAT. The enzymatic activity is linearly dependent of the expression levels and membrane association.
Tissue specificity	Retinal pigment epithelium specific.
Involvement in disease	Defects in RPE65 are the cause of Leber congenital amaurosis type 2 (LCA2) [MIM:204100]. LCA designates a clinically and genetically heterogeneous group of childhood retinal degenerations, generally inherited in an autosomal recessive manner. Affected infants have little or no retinal photoreceptor function as tested by electroretinography. LCA represents the most common genetic cause of congenital visual impairment in infants and children. Defects in RPE65 are the cause of retinitis pigmentosa type 20 (RP20) [MIM:613794]. RP leads to degeneration of retinal photoreceptor cells. Patients typically have night vision blindness and loss of midperipheral visual field. As their condition progresses, they lose their far peripheral

visual field and eventually central vision as well. RP20 inheritance is autosomal dominant.

Sequence similarities

Belongs to the carotenoid oxygenase family.

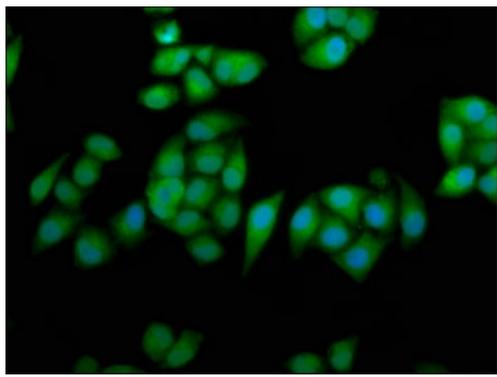
Post-translational modifications

Palmitoylation by LRAT regulates ligand binding specificity; the palmitoylated form (membrane form) specifically binds all-trans-retinyl-palmitate, while the soluble unpalmitoylated form binds all-trans-retinol (vitamin A).

Cellular localization

Cytoplasm. Cell membrane. Attached to the membrane by a lipid anchor when palmitoylated (membrane form), soluble when unpalmitoylated.

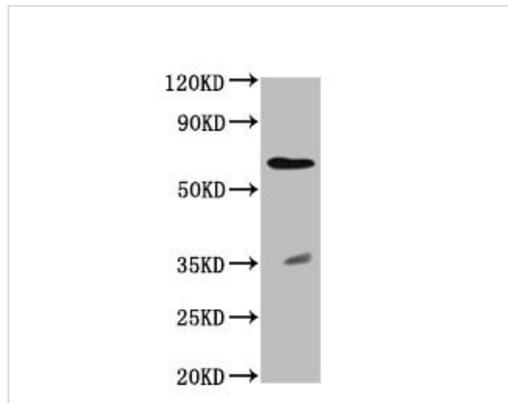
Images



Immunocytochemistry/ Immunofluorescence - Anti-RPE65 antibody (ab235950)

4% formaldehyde-fixed, 0.2% Triton X-100 permeabilized HeLa (human epithelial cell line from cervix adenocarcinoma) cells labeling RPE65 (green) using ab235950 at 1/233 dilution in ICC/IF. Counterstained with DAPI (blue).

Cells were blocked in 10% normal Goat Serum. The cells were then incubated with the antibody overnight at 4°C. The secondary antibody was Alexa Fluor® 488-conjugated Goat Anti-Rabbit IgG (H+L).



Western blot - Anti-RPE65 antibody (ab235950)

Anti-RPE65 antibody (ab235950) at 1/500 dilution + Rat brain tissue lysate

Secondary

Goat polyclonal to rabbit IgG at 1/50000 dilution

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