

RPE65 Protein, Human, Recombinant (His & Myc)

General Information

Synonyms:	Lutein isomerase;Retinoid isomerohydrolase;Meso-zeaxanthin isomerase;Retinol isomerase; RPE65;All-trans-retinyl-palmitate hydrolase;Retinal pigment epithelium-specific 65 kDa protein
Protein Construction:	2-533 aa
Species:	Human
Expression Host:	Baculovirus Insect Cells
Accession:	Q16518
Molecular Weight:	64.7 kDa (predicted)
AA Sequence:	SIQVEHPAGGYKKLFETVEELSSPLTAHVGTGRIPLWLTGSLRCGPGLFVEVGSEPFYHLFDGQALLHKFDFKEG HVTYHRRFIRTDAYVRAMTEKRIVITEFGTCAFPDPCKNIFSRFFSYFRGVEVDNALVNVYPVGEDYYACTETN FITKINPETLETIKQVDLCNYSVNGATAHPHIENDGTVYNIGNCFGKNFSIAYNIVKIPPLQADKEDPISKSEIVV QFPCSDRFKPSYVHSFGLTPNYIVFVETPVKINLFKFLSSWSLWGANYMDCFESNETMGVWLHIADKKRKKYL NNKYRTSPFNLFHHINTYEDNGFLIVDLCCWKGFVYNYLYLANLRENWEEVKKNARKAPQPEVRRYVLP NIDKADTGKNLVLTPTTATAILCSDETIWLEPEVLFSGPRQAFEPQINYQKYCGKPYTYAYGLGLNHFVDPDR LCKLNVKTKETWWWQEPDSYPSEPIFVSHPDAL EEDDGVVLSVVVSPGAGQKPAYLLILNAKDLSEVARAEVE INIPVTFHGLFKKS

QC Testing

Biological Activity:	Activity has not been tested. It is theoretically active, but we cannot guarantee it. If you require protein activity, we recommend choosing the eukaryotic expression version first.
Purity:	> 85% as determined by SDS-PAGE.
Endotoxin:	< 1.0 EU/μg of the protein as determined by the LAL method.
Formulation:	If the delivery form is liquid, the default storage buffer is Tris/PBS-based buffer, 5%-50% glycerol. If the delivery form is lyophilized powder, the buffer before lyophilization is Tris/PBS-based buffer, 6% Trehalose, pH 8.0.

Preparation and Storage

Reconstitution:

Reconstitute the lyophilized protein in sterile deionized water. The product concentration should not be less than 100 μg/mL. Before opening, centrifuge the tube to collect powder at the bottom. After adding the reconstitution buffer, avoid vortexing or pipetting for mixing.

Stability & Storage:

Lyophilized powders can be stably stored for over 12 months, while liquid products can be stored for 6-12 months at -80°C. For reconstituted protein solutions, the solution can be stored at -20°C to -80°C for at least 3 months.

Please avoid multiple freeze-thaw cycles and store products in aliquots.

Actual storage temperature shall be subject to the COA.

Shipping:

In general, lyophilized powders are shipped with blue ice, while solutions are shipped with dry ice.

Protein Background

Critical isomerohydrolase in the retinoid cycle involved in regeneration of 11-cis-retinal, the chromophore of rod and cone opsins. Catalyzes the cleavage and isomerization of all-trans-retinyl fatty acid esters to 11-cis-retinol which is further oxidized by 11-cis retinol dehydrogenase to 11-cis-retinal for use as visual chromophore. Essential for the production of 11-cis retinal for both rod and cone photoreceptors. Also capable of catalyzing the isomerization of lutein to meso-zeaxanthin an eye-specific carotenoid. 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.

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