

Recombinant Human RPE65 Protein, Myc/DDK-tagged, C13 and N15-labeled

Cat. No. RPE65-3583H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	RPE65 MS Standard C13 and N15-labeled recombinant protein (NP_000320) with a C-terminal MYC/DDK tag, was expressed in HEK293 cells.
Species	Human
Source	HEK293
Description	The protein encoded by this gene is a component of the vitamin A visual cycle of the retina which supplies the 11-cis retinal chromophore of the photoreceptors opsin visual pigments. It is a member of the carotenoid cleavage oxygenase superfamily. All members of this superfamily are non-heme iron oxygenases with a seven-bladed propeller fold and oxidatively cleave carotenoid carbon:carbon double bonds. However, the protein encoded by this gene has acquired a divergent function that involves the concerted O-alkyl ester cleavage of its all-trans retinyl ester substrate and all-trans to 11-cis double bond isomerization of the retinyl moiety. As such, it performs the essential enzymatic isomerization step in the synthesis of 11-cis retinal. Mutations in this gene are associated with early-onset severe blinding disorders such as Leber congenital.
Molecular Mass	61.4 kDa
AA Sequence	MSIQVEHPAGGYKKLFETVEELSSPLTAHVTGRIPLWLTGSLLRCGPGLFEVGSEPFYHLFDGQALLHKFDFKEGHVITYHRRFIRTDAYVRAMTEKRIVITEFGTCAFPDPCKNI

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FSRFFSYFRGVEVTDNALVNVYPVGEDYYACTETNFITKINPETLETIKQVDLCNYVS
VNGATAHPHIENDGTVYNIGNCFGKNFSIAYNIVKIPPLQADKEDPISKSEIVVQFPCS
DRFKPSYVHSFGLTPNYIVFVETPVKINLFKFLSSWSLWGANYMDCFESNETMGVW
LHIADKKRKKYLNNKYRTSPFNLFHHINTYEDNGFLIVDLCCWKGFEFVYNYLYLANL
RENWEEVKKNARKAPQPEVRRYVLPLNIDKADTGKNLVTLPNTTATAILCSDETIWLE
PEVLFSGPRQAFEPQINYQKYCGKPYTYAYGLGLNHFPDRCLCKLNVKTKETWWV
QEPDSYPSEPIFVSHPDAL EEDDGVVLSVVVSPGAGQKPAYLLILNAKDLSEVARAE
VEINIPVTFHGLFKKSTRTRPLEQKLISEEDLAANDILDYKDDDDKV

Purity	> 80% as determined by SDS-PAGE and Coomassie blue staining
Stability	Stable for 3 months from receipt of products under proper storage and handling conditions.
Storage	Store at -80 centigrade. Avoid repeated freeze-thaw cycles.
Concentration	50 µg/mL as determined by BCA
Storage Buffer	100 mM glycine, 25 mM Tris-HCl, pH 7.3.

GENE INFORMATION

Gene Name	RPE65 retinal pigment epithelium-specific protein 65kDa [Homo sapiens (human)]
Official Symbol	RPE65
Synonyms	RPE65; retinal pigment epithelium-specific protein 65kDa; retinal pigment epithelium specific protein (65kD), RP20; retinoid isomerohydrolase; all trans retinyl palmitate hydrolase; LCA2; rd12; retinol isomerase; p63; RBP-binding membrane protein; all-trans-retinyl-palmitate hydrolase; retinitis pigmentosa 20 (autosomal recessive); retinal pigment epithelium-specific 65 kDa protein; RP20; mRPE65; sRPE65;

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Gene ID	6121
mRNA Refseq	NM_000329
Protein Refseq	NP_000320
MIM	180069
UniProt ID	Q16518
SDS-PAGE	