

## Recombinant Human RPE Protein (His Tag)

**Catalog Number:** PKSH030953

**Note:** Centrifuge before opening to ensure complete recovery of vial contents.

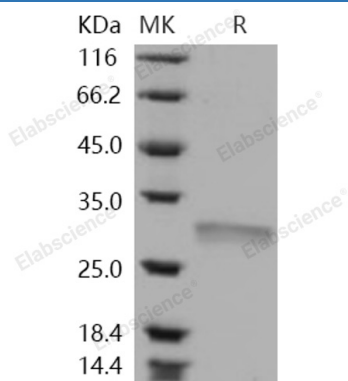
### Description

|                      |  |
|----------------------|--|
| <b>Species</b>       | Human  |
| <b>Source</b>        | HEK293 Cells-derived Human RPE protein Ala 2-Arg 228, with an N-terminal His |
| <b>Calculated MW</b> | 27.0 kDa   |
| <b>Observed MW</b>   | 30 kDa   |
| <b>Accession</b>     | NP_954699.1  |
| <b>Bio-activity</b>  | Not validated for activity   |

### Properties

|                       |   |
|-----------------------|---|
| <b>Purity</b>         | > 94 % as determined by reducing SDS-PAGE.  |
| <b>Endotoxin</b>      | < 1.0 EU per µg of the protein as determined by the LAL method.   |
| <b>Storage</b>        | Generally, lyophilized proteins are stable for up to 12 months when stored at -20 to -80°C. Reconstituted protein solution can be stored at 4-8°C for 2-7 days. Aliquots of reconstituted samples are stable at < -20°C for 3 months.       |
| <b>Shipping</b>       | This product is provided as lyophilized powder which is shipped with ice packs.   |
| <b>Formulation</b>    | Lyophilized from sterile 50mM Tris, 100mM NaCl, pH 8.0<br>Normally 5% - 8% trehalose, mannitol and 0.01% Tween 80 are added as protectants before lyophilization.<br>Please refer to the specific buffer information in the printed manual. |
| <b>Reconstitution</b> | Please refer to the printed manual for detailed information.  |

### Data



> 94 % as determined by reducing SDS-PAGE.

### Background

#### For Research Use Only

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The "ribulose phosphate binding" superfamily defined by the Structural Classification of Proteins (SCOP) database is considered the result of divergent evolution from a common (beta/alpha)<sub>8</sub>-barrel ancestor. The superfamily includes d-ribulose 5-phosphate 3-epimerase (RPE); orotidine 5'-monophosphate decarboxylase (OMPDC); and 3-keto-L-gulonate 6-phosphate decarboxylase (KGPDC). Replication of the human genome requires the activation of thousands of replicons distributed along each one of the chromosomes. Each replicon contains an initiation; or origin; site; at which DNA synthesis begins. In enzymology, a L-ribulose-5-phosphate 3-epimerase is an enzyme that catalyzes the chemical reaction L-ribulose 5-phosphate to L-xylulose 5-phosphate. Hence; RPE has one substrate; L-ribulose 5-phosphate; and one product; L-xylulose 5-phosphate. RPE belongs to the family of isomerases; specifically those racemases and epimerases acting on carbohydrates and derivatives. The systematic name of this enzyme class is L-ribulose-5-phosphate 3-epimerase. Other names in common use include L-xylulose 5-phosphate 3-epimerase; UlaE; and SgaU.

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