## PRODUCT INFORMATION

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| **Target** | RGR |
| **Synonyms** | RGR-opsin; RP44; Retinal G protein-coupled receptor |
| **Description** | Recombinant human RGR Protein with C-terminal human Fc tag |
| **Delivery** | In Stock |
| **Uniprot ID** | P47804 |
| **Expression Host** | HEK293 |
| **Tag** | C-Human Fc tag |
| **Molecular Characterization** | RGR(Met1-Glu15) hFc(Glu99-Ala330) |
| **Molecular Weight** | The protein has a predicted molecular mass of 27.7 kDa after removal of the signal peptide. |
| **Purity** | The purity of the protein is greater than 95% as determined by SDS-PAGE and Coomassie blue staining. |
| **Formulation & Reconstitution** | Lyophilized from sterile PBS, pH 7.4. Normally 5 % – 8% trehalose is added as protectants before lyophilization. Please see Certificate of Analysis for specific instructions of reconstitution. |
| **Storage&Shipping** | Store at -20°C to -80°C for 12 months in lyophilized form. After reconstitution, if not intended for use within a month, aliquot and store at -80°C (Avoid repeated freezing and thawing). Lyophilized proteins are shipped at ambient temperature. |
| **Background** | RGR encodes the retinal G protein-coupled receptor, a non-visual opsin belonging to the GPCR (G-protein coupled receptor) family. It is primarily expressed in the retinal pigment epithelium (RPE) and Müller glial cells. Unlike classical visual opsins, RGR binds all-trans-retinal instead of 11-cis-retinal and can photoisomerize it back to 11-cis-retinal upon light exposure, suggesting a role in the visual cycle regeneration of chromophore. RGR may function as a photoisomerase or light sensor, contributing to retinal pigment metabolism and photoreceptor maintenance. Mutations in RGR have been associated with retinitis pigmentosa and retinal degenerative disorders, highlighting its importance in retinal homeostasis and visual physiology. |
| **Usage** | Research use only |
| **Conjugate** | Unconjugated |

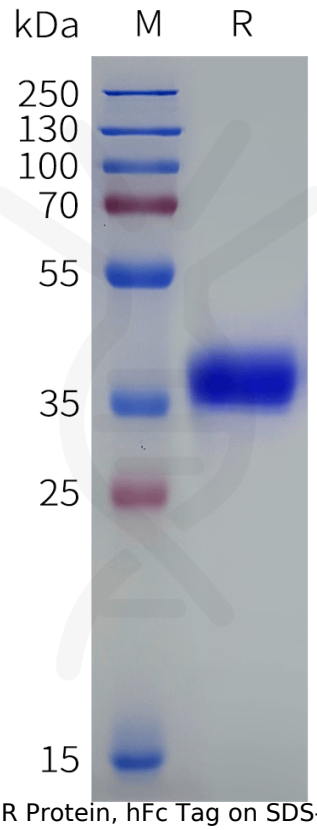


Figure 1. Human RGR Protein, hFc Tag on SDS-PAGE under reducing condition.