## PRODUCT INFORMATION

| | |
|---|---|
| **Target** | HCRTR2 |
| **Synonyms** | OX2R, Orexin receptor 2, Hypocretin receptor 2 |
| **Description** | Recombinant human HCRTR2 Protein with C-terminal human Fc tag |
| **Delivery** | In Stock |
| **Uniprot ID** | O43614 |
| **Expression Host** | HEK293 |
| **Tag** | C-Human Fc tag |
| **Molecular Characterization** | HCRTR2(Met1-Lys51) hFc(Glu99-Ala330) |
| **Molecular Weight** | The protein has a predicted molecular mass of 32.3 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. |
| **Sterility** | Products are supplied non-sterile. For cell culture applications, dilute in appropriate medium and sterile-filter (0.22 μm) prior to use. |
| **Background** | HCRTR2 (Orexin receptor 2 / Hypocretin receptor 2) is a G-protein coupled receptor (GPCR) expressed in the central nervous system, particularly in hypothalamic neurons. It couples to Gq and Gi/o proteins, activating PLC/$Ca^{2+}$ signaling and modulating adenylyl cyclase and MAPK pathways. HCRTR2 regulates wakefulness, sleep-wake cycles, appetite, and energy homeostasis. Dysregulation is associated with narcolepsy, sleep disorders, and metabolic dysfunctions, making it a therapeutic target for sleep and metabolic disorders. |
| **Usage** | Research use only |
| **Conjugate** | Unconjugated |

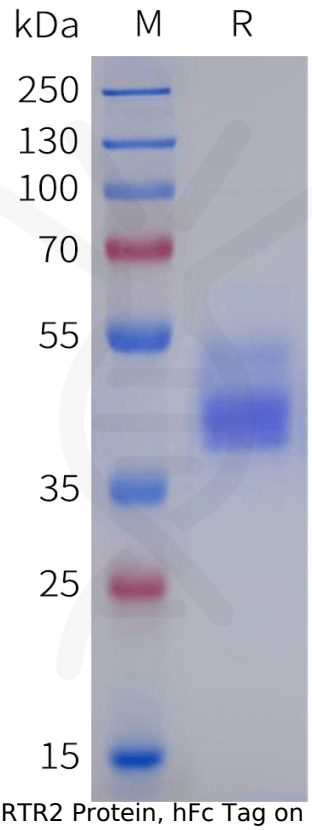


Figure 1. Human HCRTR2 Protein, hFc Tag on SDS-PAGE under reducing condition.