



Recombinant Protein Technical Manual

Recombinant Human IGF1R/CD221 Protein (His Tag)(Active)
RPES1184

Product Data:

Product SKU: RPES1184

Size: 50µg

Species: Human

Expression host: HEK293 Cells

Uniprot: NP_000866.1

Protein Information:

Molecular Mass: 81 kDa, 120 kDa and 48 kDa

AP Molecular Mass: 150 kDa, 120 kDa & 48 kDa

Tag: C-His

Bio-activity: Measured by its ability to bind biotinylated human IGF1 in a functional ELISA.

Purity: > 90 % as determined by reducing SDS-PAGE.

Endotoxin: < 1.0 EU per µg as determined by the LAL method.

Storage: 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.

Shipping: This product is provided as lyophilized powder which is shipped with ice packs.

Formulation: Lyophilized from sterile PBS Buffer, pH 7.4

Reconstitution: Please refer to the printed manual for detailed information.

Application: Functional ELISA

Synonyms: CD221;IGF-I R;IGF1 Receptor;IGFIR;IGFR;JTK13

Immunogen Information:

Sequence: Met 1-Asn 932

Background:

The insulin-like growth factor receptor (IGF1R) is a transmembrane tyrosine kinase involved in several biological processes including cell proliferation, differentiation, DNA repair, and cell survival. This is a disulfide-linked heterotetrameric transmembrane protein consisting of two α and two β subunits, and among which, the α subunit is extracellular while the β subunit has an extracellular domain, a transmembrane domain and a cytoplasmic tyrosine kinase domain. IGF1R signalling pathway is activated in the mammalian nervous system from early developmental stages. Its major effect on developing neural cells is to promote their growth and survival. This pathway can integrate its action with signalling pathways of growth and morphogenetic factors that induce cell fate specification and selective expansion of specified neural cell subsets. Modulation of cell migration is another possible role that IGF1R activation may play in neurogenesis. In the mature brain, IGF-I binding sites have been found in different regions of the brain, and multiple reports confirmed a strong neuroprotective action of the IGF-IR against different pro-apoptotic insults. IGF1R is an important signaling molecule in cancer cells and plays an essential role in the establishment and maintenance of the transformed phenotype. Inhibition of IGF1R signaling thus appears to be a promising strategy to interfere with the growth and survival of cancer cells. IGF1R is frequently overexpressed by tumours, and mediates proliferation and apoptosis protection. IGF signalling also influences hypoxia signalling, protease secretion, tumour cell motility and adhesion, and thus can affect the propensity for invasion and metastasis. Therefore, the IGF1R is now an attractive anti-cancer treatment target.