

## Recombinant IGF1R (763-931) protein

**Catalog No:** 81358, 81658

**Expressed In:** Baculovirus

**Quantity:** 20, 1000 µg

**Concentration:** 0.3 µg/µl

**Source:** Human

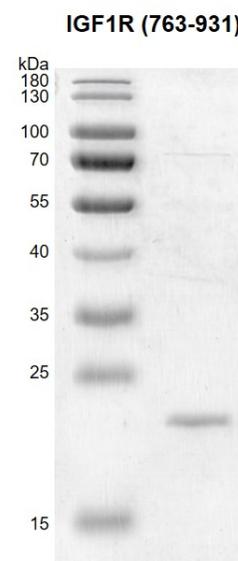
**Buffer Contents:** Recombinant IGF1R (763-931) protein is supplied in 25 mM HEPES-NaOH pH 7.5, 300 mM NaCl, 10% glycerol, 0.04% Triton X-100, and 0.5 mM TCEP

**Background:** IGF1R, a receptor tyrosine kinase which mediates actions of insulin-like growth factor 1 (IGF1) and binds IGF1 with high affinity and IGF2 and insulin (INS) with a lower affinity. The activated IGF1R is involved in cell growth and survival control. IGF1R is crucial for tumor transformation and survival of malignant cell. Ligand binding activates the receptor kinase, leading to receptor autophosphorylation, and tyrosines phosphorylation of multiple substrates, that function as signaling adapter proteins including, the insulin-receptor substrates (IRS1/2). Phosphorylation of IRSs proteins lead to the activation of two main signaling pathways: the PI3K-AKT/PKB pathway and the Ras-MAPK pathway. The result of activating the MAPK pathway is increased cellular proliferation, whereas activating the PI3K pathway inhibits apoptosis and stimulates protein synthesis. Phosphorylated IRS1 can activate the 85 kDa regulatory subunit of PI3K (PIK3R1), leading to activation of several downstream substrates, including protein AKT/PKB. AKT phosphorylation, in turn, enhances protein synthesis through mTOR activation and triggers the antiapoptotic effects of IGFIR through phosphorylation and inactivation of BAD. In parallel to PI3K-driven signaling, recruitment of Grb2/SOS by phosphorylated IRS1 leads to recruitment of Ras and activation of the ras-MAPK pathway.

**Protein Details:** Recombinant IGF1R (763-931) protein that includes amino acids 763-931 of human IGF1R protein (accession number NP\_000866.1) was expressed in a baculovirus expression system, and contains an N-terminal FLAG tag. The molecular weight of the protein is 20.4 kDa

**Application Notes:** This product was manufactured as described in Protein Details. Where possible, Active Motif has developed functional or activity assays for recombinant proteins. Additional characterization such as enzyme kinetic activity assays, inhibitor screening or other biological activity assays may not have been performed for every product. All available data this product is shown.

**Storage and Guarantee:** Recombinant proteins in solution are temperature sensitive and must be stored at -80°C to prevent degradation. Avoid repeated freeze/thaw cycles and keep on ice when not in storage. This product is for research use only and is not for use in diagnostic procedures. This product is guaranteed for 6 months from date of arrival.



**Recombinant IGF1R (763-931)  
protein gel**

12.5% SDS-PAGE with Coomassie  
staining

MW: 20.4 kDa

Purity: >85%