Recombinant Human IGF1R Protein (S982-K1286), Tag Free

Cat. No. IGF1R-0996H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant Human IGF1R (S982-K1286)(Y987F) Protein was expressed in E. coli.
Species	Human
Source	E.coli
ProteinLength	S982-K1286
Description	Receptor tyrosine kinase which mediates actions of insulin-like growth factor 1 (IGF1). 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), Shc and 14-3-3 proteins. 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

Tel: 1-631-559-9269 1-516-512-3133
Email: info@creative-biomart.com Fax: 1-631-938-8127
45-1 Ramsey Road, Shirley, NY 11967, USA

	IRS1 or Shc leads to recruitment of Ras and activation of the ras-MAPK pathway. In addition to these two main signaling pathways IGF1R signals also through the Janus kinase/signal transducer and activator of transcription pathway (JAK/STAT). Phosphorylation of JAK proteins can lead to phosphorylation/activation of signal transducers and activators of transcription (STAT) proteins. In particular activation of STAT3, may be essential for the transforming activity of IGF1R. The JAK/STAT pathway activates gene transcription and may be responsible for the transforming activity. JNK kinases can also be activated by the IGF1R. IGF1 exerts inhibiting activities on JNK activation via phosphorylation and inhibition of MAP3K5/ASK1, which is able to directly associate with the IGF1R.
Form	Liquid
Endotoxin	< 0.01 EU per μg of the protein
Purity	90%
Stability	Samples are stable for up to twelve months from date of receipt at -20 to -80 centigrade.
Storage	Store it under sterile conditions at -20 to -80 centigrade. It is recommended that the protein be aliquoted for optimal storage. Avoid repeated freeze-thaw cycles.
Storage Buffer	50 mM Tris-HCl (pH7.5), 200 mM NaCl, 20% glycerol
Shipping	It is shipped out with blue ice.

GENE INFORMATION

Gene Name	IGF1R insulin-like growth factor 1 receptor [Homo sapiens (human)]

Tel: 1-631-559-9269 1-516-512-3133
Email: info@creative-biomart.com Fax: 1-631-938-8127
45-1 Ramsey Road, Shirley, NY 11967, USA

Official Symbol	IGF1R
Synonyms	IGF1R; insulin-like growth factor 1 receptor; CD221; IGFIR; IGFR; JTK13; MGC18216; IGF-I receptor; soluble IGF1R variant 1; soluble IGF1R variant 2; insulin-like growth factor I receptor; MGC142170; MGC142172;
Gene ID	3480
mRNA Refseq	NM_000875
Protein Refseq	NP_000866
MIM	147370
UniProt ID	P08069

Tel: 1-631-559-9269 1-516-512-3133
Email: info@creative-biomart.com Fax: 1-631-938-8127
45-1 Ramsey Road, Shirley, NY 11967, USA