

Recombinant Human Insulin-Like Growth Factor 1 Receptor

Cat. No. IGF1R-663H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant IGF1R is a disulfide-linked monomeric protein consisting of 71 amino acid residues subunits. IGF1R migrates as an approximately 8 kDa protein under non-reducing and reducing conditions in SDS-PAGE, and was lyophilized from a 0.2 µm filtered PBS solution, pH 7.4.
Species	Human
Source	Human
Description	IGF1R, also known as somatomedin C, is the dominant effector of growth hormone and is structurally homologous to proinsulin. Human IGF1R is synthesized as two precursor isoforms with N- and alternate C- terminal propeptides. These isoforms are differentially expressed by various tissues. The 7.6 kDa mature IGF-I is identical between isoforms and is generated by proteolytic removal of the N- and C- terminal regions. Mature human IGF1R shares 94% and 96% aa sequence identity with mouse and rat IGF-I, respectively, and exhibits cross-species activity. It shares 64% aa sequence identity with mature human IGF-II. Circulating IGF-I is produced by hepatocytes, while local IGF-I is produced by many other tissues in which it has paracrine effects.
Purity	>95%, as determined by SDS-PAGE and HPLC.
Sequence	MGKISSLPTQ LFKCCFCDFL KVKMHTMSSS HLFYLALCLL TFTSSATAGPETLCGAELVD ALQFVCGDRG FYFNKPTGYG SSSRRAPQTG

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IVDECCFRSC DLRRLEMYCA PLKPAKSARSVRAQRHTDMP KTQKEVHLKN
ASRGSAGNKN YRM

Molecular Weight

Nativehuman Insulin Growth Factor-1 is generated by the proteolytic removal of the signal peptide and propeptide, the molecule has a calculated molecular mass of approximately 8 kDa.

Biological Activity

The ED₅₀ was determined by a cell proliferation assay using FDC-P1 cells is ≤ 1.0 ng/ml, corresponding to a specific activity of ≥ 1 × 10⁶ units/mg.

Endotoxin

Endotoxin content was assayed using a LAL gel clot method. Endotoxin level was found to be less than 0.1 ng/g (1 EU/g).

Reconstitution

A quick spin of the vial followed by reconstitution in distilled water to a concentration not less than 0.1 mg/mL. This solution can then be diluted into other buffers.

Storage

The lyophilized protein is stable for at least 2 years from date of receipt at -20°C. Upon reconstitution, this cytokine can be stored in working aliquots at 2°C - 8°C for one month, or at -20°C for six months, with a carrier protein without detectable loss of activity. Avoid repeated freeze/thaw cycles.

Official Symbol

IGF1R

Pathways

Adherens junction; Apoptosis; Endochondral Ossification; Endocytosis; Glioma; Glioma; IGF1 pathway; Id Signaling Pathway; Insulin Signaling; Integrins in angiogenesis; Long-term depression; Melanoma; Pathways in cancer; Pathways in cancer; Prostate cancer; Senescence and Autophagy

GENE INFORMATION

Gene Name

IGF1R insulin-like growth factor 1 receptor [Homo sapiens]

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Synonyms	IGF1R; insulin-like growth factor 1receptor; IGFR; CD221; IGfir; JTK13; MGC18216; MGC142170;MGC142172; insulin-like growth factor 1 receptor; IGF-I receptor;OTTHUMP00000194784; soluble IGF1R variant 1; soluble IGF1R variant 2;insulin-like growth factor I receptor
Gene ID	3480
mRNA Refseq	NM_000875
Protein Refseq	NP_000866
MIM	147370
UniProt ID	P08069
Chromosome Location	15q26
Function	ATPbinding; identical protein binding; insulin binding; insulin receptorbinding; insulin receptor substrate binding; insulin-like growthfactor-activated receptor activity; metal ion binding; nucleotide binding;phosphatidylinositol 3-kinase binding; protein binding; protein tyrosinekinase activity; receptor activity
Thefirst three domains of insulin-like growth factor 1 receptor. PDB renderingbased on 1igr.	

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