

Product datasheet

Recombinant human R3 IGF1 protein ab58738

Description

Product name	Recombinant human R3 IGF1 protein
Biological activity	This protein has been shown to stimulate protein synthesis in L6 myoblasts at an ED50 of \leq 10 ng/ml.
Expression system	Escherichia coli
Accession	P05019
Protein length	Full length protein
Animal free	No
Nature	Recombinant
Species	Human
Predicted molecular weight	8 kDa
Amino acids	1 to 71
Additional sequence information	R3 IGF1 is a 71aa analog of IGF-1 comprising the complete human sequence with substitution of an R for the E at position 3, hence R3.

Specifications

Our [Abpromise guarantee](#) covers the use of **ab58738** in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Applications	Functional Studies
Form	Lyophilized
Additional notes	R ³ IGF1 is a recombinant analog of insulin-like growth factor containing the complete human IGF1 amino acid sequence with substitution of Arg for Glu 3. It was developed as an inexpensive, high quality potent analog of IGF for use as a growth factor supplement for serum-free or low serum cell culture. Recombinantly produced in E. coli using a patented expression system, the peptide is harvested from cells in inclusion bodies, which are dissolved and desalting. The active molecule is properly folded under oxidizing conditions and then purified by several liquid chromatography steps.

NOTE: This protein is full length, SwissProt ID P05019. The protein undergoes molecular processing and the IGF1 is full length at aa 49-118. The rest of the sequence is signal peptide and propeptide

Preparation and Storage

Stability and Storage	Shipped at 4°C. Store at 4°C prior to reconstitution. Upon delivery aliquot. Store at -20°C. Avoid freeze / thaw cycle. The product is lyophilized from 0.1 M acetic acid This product is an active protein and may elicit a biological response in vivo, handle with caution.
Reconstitution	Dissolve in 100 µl of 10 mM HCl to create a 1mg/ml stock. For concentrations of <1 mg/ml in buffer, a carrier protein should be added to minimize adsorption of the peptide to plastic or glass surfaces. BSA between 1–5 mg/ml is recommended in serum-free conditions. A carrier protein not necessary in serum-supplemented media. Up to 400 ml of buffer soln containing BSA or serum-supplemented medium may be added to the stock soln in the vial and mixed. Long-term storage of <1 mg/ml not recommended.

General Info

Relevance	R3 IGF1 is an 83 amino acid analog of IGF1 comprising the complete human IGF1 sequence with the substitution of an Arg(R) for the Glu(E) at position three, hence R3, and a 13 amino acid extension peptide at the N terminus. This analog of IGF1 has been produced with the purpose of increasing the biological activity of the IGF peptide. Insulin-like growth factors (IGFs), comprise a family of peptides that play important roles in mammalian growth and development. IGF1 mediates many of the growth-promoting effects of growth hormone. R3 IGF1 is significantly more potent than IGF1. The enhanced potency is due to the decreased binding of Long R3 IGF1 to all known IGF binding proteins. These binding proteins normally inhibit the biological actions of IGF's.
Cellular localization	Secreted

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