

IGF-II

Insulin Like Growth Factor II, IGF-2 human, recombinant, *E. coli*

Cat. No.	Amount
PR-454	50 µg

For *in vitro* use only
Quality guaranteed for 12 months
Store at -20°C

Avoid freeze / thaw cycles

Form

Lyophilized.

Solubility

It is recommended to reconstitute the lyophilized IGF-II in sterile bidest H₂O not less than 100 µg/ml, which can then be further diluted to other aqueous solutions. For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA).

Activity

EC₅₀: < 1.0 ng/ml, corresponding to a specific activity of 10⁶ IU/ml, calculated by the competitive binding of IGF-II plasma derived to human placental membrane.

Endotoxin

Less than 0.1 ng/µg (IEU/µg) of IGF-II.

Molecular Weight

8 kDa

Purity

≥ 95% by SDS-PAGE and RP-HPLC

Description

Insulin-like growth factors-I and -II (IGF-I and IGF-II) are small peptides, which are able to promote cell proliferation, differentiation and survival resulting predominantly from interactions with the type 1 IGF receptor.

The availability of IGF to bind to IGF receptors is influenced by Insulin-like Growth Factor Binding Proteins (IGFBPs). IGF-II is mainly produced by liver cells and is crucial in normal fetal growth.

Compared with IGF-I, IGF-II is more well-known as a tumor genesis marker.

Recombinant human IGF-II produced in *E. coli* is a single, non-glycosylated, polypeptide chain containing 67 amino acids and having a molecular mass of 7.505 kDa.

Recombinant IGF-II is purified by proprietary chromatographic techniques.

Selected References:

- Forbes *et al.* (2002) Characteristics of binding of insulin-like growth factor (IGF)-I and IGF-II analogues to the type 1 IGF receptor determined by BIAcore analysis. *Eur. J. Biochem.* **269**:961.
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- Smink *et al.* (2002) IGF and IGF-binding protein expression in the growth plate of normal, dexamethasone-treated and human IGF-II transgenic mice. *J. Endocrinol.* **175**:143.
- van Dijk *et al.* (2001) Kinetics and regulation of site-specific endonucleolytic cleavage of human IGF-II mRNAs. *Nucleic Acids Res.* **29**:3477.
- Fichera *et al.* (2000) A quantitative reverse transcription and polymerase chain reaction assay for human IGF-II allows direct comparison of IGF-II mRNA levels in cancerous breast, bladder, and prostate tissues. *Growth Horm. IGF Res.* **10**:61.
- Mason *et al.* (1996) Measurement of human IGF-II using Sephacryl extraction: a rapid and reliable assay method. *Ann. Clin. Biochem.* **33**:201.
- Scheper *et al.* (1996) The cis-acting elements involved in endonucleolytic cleavage of the 3' UTR of human IGF-II mRNAs bind a 50 kDa protein. *Nucleic Acids Res.* **24**:1000.