

## Human IGF-II

Human Insulin-like growth factor -II, Somatamedin A, recombinant

Synonyms: Somatomedin-A, IGF2, INSIGF, pp9974, C11orf43, FLJ22066, FLJ44734.

*PLEASE NOTE: ALWAYS CENTRIFUGE VIAL BEFORE OPENING*

Size	Order #	Lot #	Expiry Date
10 µg	1481.950.010		
50 µg	1481.950.050		
1 mg	1481.950.199		

Please enquire for bulk quantities and other vial sizes

### Description

Recombinant Human IGF-II is a globular protein containing 67 amino acids, It has 3 intra-molecular disulfide bonds and a molecular mass of 7.5 kDa. The IGFs are mitogenic, polypeptide growth factors that stimulate the proliferation and survival of various cell types, including muscle, bone, and cartilage tissue in vitro. IGFs are predominantly produced by the liver, although a variety of tissues produce the IGFs at distinctive times. The IGFs belong to the Insulin gene family, which also contains insulin and relaxin. The IGFs are similar to insulin by structure and function, but have a much higher growth-promoting activity than insulin. IGF-II expression is influenced by placenta lactogen, while IGF-I expression is regulated by growth hormone. Both IGF-I and IGF-II signal through the tyrosine kinase type I receptor (IGF-IR), but IGF-II can also signal through the IGF-II/Mannose-6-phosphate receptor. Mature IGFs are generated by proteolytic processing of inactive precursor proteins, which contain N-terminal and C-terminal propeptide regions.

- **Biological Activity** ≥ 1 x 10<sup>6</sup> units/mg
- **Source** *E. Coli*
- **Purity** ≥ 97 % (SDS-PAGE, RP-HPLC)
- **Endotoxin level** ≤ 0.1ng/µg (≤ 1EU/µg)
- **Stabilizer** None
- **Buffer** TFA 0.1%\*
- **Physical state** Sterile filtered, lyophilized

### Biological Activity

The ED<sub>50</sub> of ≤ 1ng/ml was determined by the dose dependent stimulation the proliferation of MCF-7 cells. It corresponds to a specific activity of ≥ 1 x 10<sup>6</sup> units/mg.

### Reconstitution

We recommend a quick spin followed by reconstitution in water to a concentration of at least 0.1 mg/ml. Do not vortex. This solution can be stored at 2-8°C for up to 1 week or in working aliquots at -20°C to -80°C. Working aliquots should be at the highest practical concentration. For extended storage, it is recommended to further dilute in a buffer containing a carrier (e.g. 0.1% HSA order number: 2835.955.xyz or 2835.958.xyz) and store in working aliquots at -20°C to -80°C.

### Stability

The lyophilized protein is stable at room temperature for up 1 month and at least until the lot specific expiry date if kept below -18°C. Reconstituted IGF-II is stable for at least 6 months when stored in working aliquots at -20°C to -80°C. **Please avoid repeated freeze-thaw cycles.**

### Amino Acid Sequence

AYRPSETLCG GELVDTLQFV CGDRGFYFSR PASRVRRSR GIVEECCFRS CDLALLETYC ATPAKSE

**Usage:** For research use only. Not for use in diagnostic or therapeutic procedures. Not for human use.

\*The Buffer may vary depending on the Lot #. Please contact our technical support if you have specific requirements.

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