

## Recombinant Human Insulin-like Growth factor-2 (Human IGF-2)

### Product Information

Product Name	Cat#	Size
Recombinant Human Insulin-like Growth factor-2 (Human IGF-2)	92207ES10	10µg
	92207ES60	100µg
	92207ES76	500µg

### Product Description

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. Recombinant Human IGF-I and IGF-II are globular proteins containing 70 and 67 amino acids, respectively, and 3 intra-molecular disulfide bonds.

### Product Properties

<b>Synonyms</b>	Insulin-like Growth Factor-II, Somatamedin A
<b>Accession</b>	E3UN46
<b>GeneID</b>	3481
<b>Source</b>	E.coli-derived Human IGF-2 protein,Ala25-Glu91.
<b>Molecular Weight</b>	Approximately 7.5 kDa.
<b>AA Sequence</b>	AYRPSETLCG GELVDTLQFV CGDRGFYFSR PASRVRRSR GIVECCFRS CDLALLETYC ATPAKSE
<b>Tag</b>	None
<b>Physical Appearance</b>	Sterile Filtered White lyophilized (freeze-dried) powder.
<b>Purity</b>	> 98% by SDS-PAGE and HPLC analyses.
<b>Biological Activity</b>	Fully biologically active when compared to standard. The ED <sub>50</sub> as determined by a cell proliferation assay using serum free human MCF-7 cells is less than 2 ng/mL, corresponding to a specific activity of > 5.0 × 10 <sup>5</sup> IU/mg.
<b>Endotoxin</b>	< 1.0 EU per 1µg of the protein by the LAL method.
<b>Formulation</b>	Lyophilized from a 0.2 µm filtered concentrated solution in 20 mM Tris-HCl, pH 8.0, 150 mM NaCl, with 0.02 % Tween-20.  We recommend that this vial be briefly centrifuged prior to opening to bring the contents to the bottom.
<b>Reconstitution</b>	Reconstitute in sterile distilled water or aqueous buffer containing 0.1 % BSA to a concentration of 0.1-1.0 mg/mL. Stock solutions should be apportioned into working aliquots and stored at ≤ -20 °C.  Further dilutions should be made in appropriate buffered solutions.

## **Shipping and Storage**

The products are shipped with ice pack and can be stored at  $-20^{\circ}\text{C}$  to  $-80^{\circ}\text{C}$  for 1 year.

Recommend to aliquot the protein into smaller quantities when first used and avoid repeated freeze-thaw cycles.

## **Cautions**

1. Avoid repeated freeze-thaw cycles.
2. For your safety and health, please wear lab coats and disposable gloves for operation.
3. For research use only.