

# Technical Data Sheet

## **Flogen<sup>®</sup> Recombinant Human Insulin-like Growth Factor-I (rHuIGF-I)**

<b>Catalog Number:</b>	PGR0105-001
<b>Source:</b>	<i>Escherichia coli</i> .
<b>Molecular Weight:</b>	Approximately 7.6 kDa, a single non-glycosylated polypeptide chain containing 70 amino acids.
<b>Quantity:</b>	20µg/100µg/1mg
<b>AA Sequence:</b>	GPETLCGAEL VDALQFVCGD RGFYFNKPTG YGSSSRAPQ TGIVDECCFR SCDLRRLEMY CAPLKPAKSA
<b>Purity:</b>	>95% by SDS-PAGE and HPLC analyses.
<b>Biological Activity:</b>	Fully biologically active when compared to standard. The ED <sub>50</sub> 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>Appearance:</b>	Sterile Filtered White lyophilized (freeze-dried) powder.
<b>Formulation:</b>	Lyophilized from a 0.2µm filtered concentrated solution in PBS, pH 7.4.
<b>Endotoxin:</b>	Less than 1EU/µg of rHuIGF-I as determined by LAL method.
<b>Reconstitution:</b>	We recommend that this vial be briefly centrifuged prior to opening to bring the contents to the bottom. 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.
<b>Storage:</b>	This lyophilized preparation is stable at 2-8°C, but should be kept at -20°C for long term storage, preferably desiccated. Upon reconstitution, the preparation is stable for up to one week at 2-8°C. For maximal stability, apportion the reconstituted preparation into working aliquots and store at -20°C. <b>Avoid repeated freeze/thaw cycles.</b>
<b>Usage:</b>	This material is for research, laboratory or further evaluation purposes. <b>NOT FOR HUMAN USE.</b>

### ***Human Insulin-like Growth Factor-I***

The Insulin-like Growth factors (IGFs) are mitogenic polypeptide growth factors that stimulate the proliferation and survival of various cell types including muscle, bone, and cartilage tissue in vitro. The liver predominantly produces IGFs, 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 by structure and function to insulin, 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. Proteolytic processing of inactive precursor proteins, which contain N-terminal and C-terminal propeptide regions, generates mature IGFs. Recombinant human IGF-I and IGF-II are globular proteins containing 70 and 67 amino acids, respectively, and 3 intra-molecular disulfide bonds.