

Growth Factor Data Sheet

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IGF1 belongs to the insulin gene family. It is a mitogenic polypeptide growth factor that stimulates the proliferation and survival of various cell types including muscle, bone, and cartilage tissue in vitro. IGF1 DES is a truncated variant of human IGF1 with the tripeptide Gly-Pro-Glu absent from the N-terminus. It has been isolated from bovine colostrum, human brain, and porcine uterus. The IGF1 DES is believed to result from post-translational cleavage of IGF1 via protease activity. It is about 10-fold more potent than IGF1 at stimulating hypertrophy and proliferation of cultured cells, a consequence of much reduced binding to IGF-binding proteins, which is in turn caused by the absence of the glutamate at position 3. Clinical opportunities for IGF1-DES have not yet been evaluated, but could apply in catabolic states as well as for the treatment of inflammatory bowel diseases.

Catalog Number	1150-01B
Product Name	IGF1 DES, Human Recombinant HumanDES1-3 Insulin-like Growth Factor 1 (rHuDES(1-3) IGF1) Truncated IGF1 DES IGF-1
Source	<i>Escherichia coli</i>
MW	~7.4 kDa (67 amino acids)
Sequence	TLCGAELVDA LQFVCGDRGF YFNKPTGYGS SSRRAPQTGI VDECCFRSCD LRRLEMYCAP LKPAKSA
Accession Number	P05019
Purity	>97% by SDS-PAGE and HPLC analyses
Biological Activity	Fully biologically active when compared to standard. The ED ₅₀ as determined by a cell proliferation assay using serum free human MCF-7 cells is less than 2.0 ng/ml, corresponding to a specific activity of >5.0 × 10 ⁵ IU/mg.
Formulation	Sterile filtered white lyophilized powder. Purified and tested for use in cell culture.
Storage/Handling	This lyophilized preparation is stable at 2-8°C, but should be kept at -20°C for long term storage. The reconstituted sample can be apportioned into working aliquots and stored at -80 °C for up to 6 months. Avoid repeated freeze/thaw cycles.
Reconstitution	The sample should be briefly centrifuged prior to opening to bring the contents to the bottom. Reconstitute in a siliconized tube using PBS that contains a 0.1% BSA to a concentration of 0.1-1.0 mg/mL. Reconstituted solutions are stable for up to one week at 2-8°C. Stock solutions should be aliquoted and stored at -80°C. Further dilutions should be made in appropriate buffered solutions containing BSA or serum.