

Recombinant Human DES1-3 Insulin-like Growth Factor 1

#R00119

Size: 100 µg

Stability & Storage

Use a manual defrost freezer and avoid repeated freeze-thaw cycles.

- 12 months from date of receipt, -20 to -70 °C as supplied.
- 1 month, 2 to 8 °C under sterile conditions after reconstitution.
- 3 months, -20 to -70 °C under sterile conditions after reconstitution.



Warning: This product is intended for scientific research only. It is not to be used for medical or diagnostic procedures in humans or animals, nor as a food, cosmetic, or household product.

Background

IGF-1 belonged to the insulin gene family, is a mitogenic polypeptide growth factor that stimulates the proliferation and survival of various cell types including muscle, bone, and cartilage tissue in vitro. DES(1-3)IGF-1, is a truncated variant of human IGF-1 with the tripeptide Gly-Pro-Glu absent from the N-terminus. It has been isolated from bovine colostrum, human brain and porcine uterus. The DES(1-3)IGF-1 probably results from post-translational cleavage of IGF-1. It has about 10-fold more potent than IGF-1 at stimulating hypertrophy and proliferation of cultured cells, a consequence of much reduced binding to IGF-binding proteins, in turn caused by the absence of the glutamate at position 3. Clinical opportunities for DES(1-3)IGF-1 have not yet been evaluated, but could apply in catabolic states as well as for the treatment of inflammatory bowel diseases.

AA Sequence

TLCGAELVDALQFVCGDRGFYFNKPTGYGSSSRRAP
QTGIVDECCFRSCDLRRLEMYCAPLKPAKSA

Reconstitution

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.

Product Specification

Synonyms	DES1-3 IGF-I, DES(1-3) IGF-I, IGF-I DES(1-3), DES1-3/Insulin-Like Growth factor 1
Accession	P05019
GeneID	3479
Species	Human
Source	Escherichia coli.
Molecular Weight	Approximately 7.4 kDa, a single non-glycosylated polypeptide chain containing 67 amino acids.
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 ng/ml, corresponding to a specific activity of $> 5.0 \times 10^5$ IU/mg.

Physical Appearance Sterile Filtered White lyophilized (freeze-dried) powder.

Formulation Lyophilized from a 0.2 μ m filtered concentrated solution in PBS, pH 7.4.

Endotoxin Less than 50 EU/mg of rHuDES1-3 IGF-1 as determined by LAL method.