

Recombinant Human DES1-3 Insulin-like Growth Factor 1

Product Information

Cat

CGF-037

Product Name

Recombinant Human DES1-3 Insulin-like Growth Factor 1

Synonyms

DES1-3 IGF-I, DES(1-3) IGF-I, IGF-I DES(1-3), DES1-3/Insulin-Like Growth factor 1

GenID

3479

Source

Escherichia coli.

Molecular Weight

Approximately 7.4 kDa, a single non-glycosylated polypeptide chain containing 67 amino acids.

AA Sequence

TLCGAELVDA LQFVCGDRGF YFNKPTGYGS SSRRAPQTGI VDECCFRSCD LRRLEMYCAP LKPAKSA

Purity

> 97 % by SDS-PAGE and HPLC analyses.

Biological Activity

Fully biologically active when compared to standard. The ED50 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.

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Formulation

Lyophilized from a 0.2 µm filtered concentrated solution in PBS, pH 7.4.

Endotoxin

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

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.

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.
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Usage

This material is offered by Creative Biomart for research, For research and further manufacturing use only.

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

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for the treatment of inflammatory bowel diseases.
