



Product Datasheet

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| Product Name | Growth Differentiation Factor-5 Human Recombinant |
| Cata No | CB500344 |
| Source | <i>Escherichia Coli</i> . |
| Synonyms | Cartilage-derived morphogenetic protein-1, CDMP-1, LAP4, SYNS2, GDF-5, Radotermin, CDMP1, GDF5, Growth differentiation factor 5, BMP-14. |

Description

GDF-5 is a member of the bone morphogenetic protein (BMP) family and the TGF-beta superfamily. This group of proteins is characterized by a polybasic proteolytic processing site which is cleaved to produce a mature protein containing seven conserved cysteine residues. The members of this family are regulators of cell growth and differentiation in both embryonic and adult tissues. Mutations in this gene are associated with acromesomelic dysplasia, Hunter-Thompson type; brachydactyly, type C; and chondrodysplasia, Grebe type. These associations confirm that the gene product plays a role in skeletal development.

Growth Differentiation Factor 5 Human Recombinant produced in E.Coli is a homodimer, non-glycosylated, polypeptide chain containing 2 x 117 amino acids and having a total molecular mass of 26.8 Dalton.

To enable bacterial expression of GDF-5 we removed the N-terminal sequence Ala-Pro-Leu-Thr and added the Lys. GDF5 is purified by proprietary chromatographic techniques.

Physical Appearance

Sterile Filtered White lyophilized (freeze-dried) powder.

Biological Activity

Induction of alkaline phosphatase activity in ATDC5 cells:
EC₅₀ = 40Nm.

Purity

Greater than 98.0% as determined by:

- (a) Analysis by RP-HPLC.
- (b) Analysis by SDS-PAGE.

Formulation

The protein was lyophilized without any additives.

Stability

Lyophilized Growth Differentiation Factor 5 although stable at room temperature for 3 weeks, should be stored desiccated below -18°C. Upon reconstitution Growth Differentiation Factor-5 should be stored at 4°C be tween 2-7 days and for future use below -18°C.

For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA).

Please prevent freeze-thaw cycles.

Sequence

The sequence of the first five N-terminal amino acids was determined and was found to be Met-Lys-Arg-Gln-Gly.

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