

Recombinant Human Growth Differentiation Factor 5 active (rh GDF-5 active / BMP-14 active)

Synonyms: Cartilage-derived morphogenetic protein-1 (CDMP-1), LAP4, SYNS2, Radotermin

Introduction: 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.

Description: Recombinant human GDF-5 produced in E.Coli is a homodimer, non-glycosylated, polypeptide chain containing 2 x 120 amino acids and having a total molecular mass of 27.4kDa .To enable bacterial expression of rhGDF-5 the N-terminal sequence Ala-Pro-Leu-Thr was replaced with a Lys. RhGDF-5 is purified by proprietary chromatographic techniques.

Source: *Escherichia Coli*.

Physical Appearance: Sterile filtered white lyophilized (freeze-dried) powder.

Formulation: The protein was lyophilized from a 0.2µm filtered concentrated solution in 100 mM acetic acid.

Solubility: It is recommended to reconstitute the lyophilized rh GDF-5 in sterile H₂O not less than 100 µg/ml, which can then be further diluted to other aqueous solutions.

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 between 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.

Purity: 95% (verified by SDS-PAGE / silver stain)

Amino acid sequence: APSATRQGKRPSKNLKARCS RKALHVNFKDMGWDDWIIAP
LEYEAFHCEGLCEFFPLRSHL EPTNHAVIQTLMNSMDPEST PPTCCVPTLSPISILFIDS
ANNVYKQYEDMVVESCGR

Biological Activity: ED₅₀ = 10-20 ng/ml, determined by the induction of alkaline phosphatase activity in ATDC5 cells

Endotoxicity: The endotoxin level is less than 1 EU / µg determined by LAL method.

This material is offered for **research use only**. Not for use in human. For in vitro use only. ImmunoTools will not be held responsible for patent infringement or other violations that may occur with the use of our products.

<i>small</i>	10 µg	Cat.N°	11343953
<i>medium</i>	50 µg	Cat.N°	11343955
<i>large</i>	250 µg	Cat.N°	11343957
<i>x-large</i>	1000 µg	Cat.N°	11343958

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