

## Growth and Differentiation factor 5 Active Protein | GDF5 active protein

Recombinant Human Growth and Differentiation factor 5

CATALOG #  
**AAA38207**

HOST  
**E Coli**

### PRODUCT SYNONYMS

Growth and Differentiation factor 5; Recombinant Human Growth and Differentiation factor 5; GDF5 Human; Growth Differentiation Factor-5 Human Recombinant; Cartilage-derived morphogenetic protein-1; CDMP-1; LAP4; SYNS2; GDF-5; Radotermis; CDMP1; GDF5; Growth differentiation factor 5; BMP-14; GDF5 active protein

### PRODUCT SPECIFICATIONS

|                         |                                                                                                                                                                                                                                                                                                                                                                                                              |
|-------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Host                    | E Coli                                                                                                                                                                                                                                                                                                                                                                                                       |
| Purity/Purification     | Greater than 98.0% as determined by: (a) Analysis by RP-HPLC. (b) Analysis by SDS-PAGE.                                                                                                                                                                                                                                                                                                                      |
| Form/Format             | The protein was lyophilized without any additives.<br>Sterile Filtered White lyophilized (freeze-dried) powder.                                                                                                                                                                                                                                                                                              |
| Sequence                | APSATRQGKR PSKNLKARCS RKALHVNFKD MGWDDWIIAP LEYEAHFCEG LCEFPLRSHL EPTNHAVIQT<br>LMNSMDPEST PPTCCVPTRL SPISILFIDS ANNVVYKQYE DMVVESCGCR                                                                                                                                                                                                                                                                       |
| Sequence Length         | 501                                                                                                                                                                                                                                                                                                                                                                                                          |
| Solubility              | It is recommended to reconstitute the lyophilized Growth Differentiation Factor-5 in sterile 18M Omega -cm H <sub>2</sub> O not less than 100 ug/ml, which can then be further diluted to other aqueous solutions.                                                                                                                                                                                           |
| Protein Content         | Protein quantitation was carried out by two independent methods:1. UV spectroscopy at 280 nm using the absorbency value of 1.15 as the extinction coefficient for a 0.1% (1mg/ml) solution. This value is calculated by the PC GENE computer analysis program of protein sequences (IntelliGenetics). 2. Analysis by RP-HPLC, using a standard solution of GDF5 as a Reference Standard.                     |
| Biological Activity     | GDF-5 activity as determined by the induction of alkaline phosphatase activity in ATDC5 cells is typically 10-20ng/ml.                                                                                                                                                                                                                                                                                       |
| Preparation and Storage | Lyophilized Growth Differentiation Factor 5 although stable at room temperature for 3 weeks, should be stored desiccated below -18 degree C. Upon reconstitution Growth Differentiation Factor-5 should be stored at 4 degree C between 2-7 days and for future use below -18 degree C.For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA).Please prevent freeze-thaw cycles. |

### ADDITIONAL INFORMATION

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| Related Product Information for GDF5 active protein | <p><b>Description:</b> Growth Differentiation Factor 5 Human Recombinant 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 the N-terminal sequence of Ala-Pro-Leu-Thr was replaced with a Lys.GDF5 is purified by proprietary chromatographic techniques.</p> <p><b>Introduction:</b> 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.</p> |
| Product Categories/Family for GDF5 active protein   | Cytokines and Growth Factors; Cytokines; Bone Morphogenetic Protein                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |

NCBI AND UNIPROT INFORMATION

|                                  |                                                                                                                                                                                                  |
|----------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| NCBI GI #                        | 611435007                                                                                                                                                                                        |
| NCBI GeneID                      | 8200                                                                                                                                                                                             |
| NCBI Accession #                 | NP_000548.2                                                                                                                                                                                      |
| NCBI GenBank Nucleotide #        | NM_000557.4                                                                                                                                                                                      |
| UniProt Accession #              | P43026; Q96SB1; E1P5Q2                                                                                                                                                                           |
| Molecular Weight                 | 55,411 Da                                                                                                                                                                                        |
| NCBI Official Full Name          | growth/differentiation factor 5 preproprotein                                                                                                                                                    |
| NCBI Official Synonym Full Names | growth differentiation factor 5                                                                                                                                                                  |
| NCBI Official Symbol             | GDF5                                                                                                                                                                                             |
| NCBI Official Synonym Symbols    | OS5; LAP4; BDA1C; BMP14; CDMP1; LAP-4; SYM1B; SYNS2; BMP-14                                                                                                                                      |
| NCBI Protein Information         | growth/differentiation factor 5; CDMP-1; LPS-associated protein 4; bone morphogenetic protein 14; cartilage-derived morphogenetic protein-1; lipopolysaccharide-associated protein 4; radotermin |
| UniProt Protein Name             | Growth/differentiation factor 5                                                                                                                                                                  |
| UniProt Gene Name                | GDF5                                                                                                                                                                                             |
| UniProt Synonym Gene Names       | BMP14; CDMP1; GDF-5; BMP-14; CDMP-1; LAP-4; LPS-associated protein 4                                                                                                                             |
| UniProt Entry Name               | GDF5_HUMAN                                                                                                                                                                                       |

**For Research Use Only.** Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.

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Online datasheet: <https://stage.aaabiotech.com/e-coli-gdf5-active-protein/growth-and-differentiation-factor-5/38207>