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GDF5 Human

Growth Differentiation Factor-5 Human Recombinant
CYK0176

Product Overview

Name	GDF5 Human
Description	
Growth Differentiation Factor-5 Human Recombinant	
Accession (Primary)	P43026
Synonyms	
Cartilage-derived morphogenetic protein-1, CDMP-1, LAP4, SYNS2, GDF-5, Radotermin, CDMP1, GDF5, Growth differentiation factor 5, BMP-14.	
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.	
Source	
Escherichia Coli.	
Physical Appearance	
Sterile Filtered White lyophilized (freeze-dried) powder.	
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 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	
Greater than 98.0% as determined by: (a) Analysis by RP-HPLC. (b) Analysis by SDS-PAGE.	
Amino acid sequence	

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APSATRQGKR PSKNLKARCS RKALHVNFKD MGWDDWIIAP LEYEAFHCEG LCEFPLRSHL EPTNHAVIQT LMNSMDPEST PPTCCVPTRL SPISILFIDS ANNVVYKQYE DMVVESCGCR.

Biological Activity

GDF-5 activity as determined by the induction of alkaline phosphatase activity in ATDC5 cells is typically 10-20ng/ml.

Solubility

It is recommended to reconstitute the lyophilized Growth Differentiation Factor-5 in sterile 18MΩ-cm H2O not less than 100 µg/ml, which can then be further diluted to other aqueous solutions.

References

Title :Growth/differentiation Factor-5 Induces Osteogenic Differentiation of Human Ligamentum Flavum Cells through Activation of ERK1/2 and p38 MAPK. Publication : Cell Physiol Biochem 2010;26:179-186 (DOI: 10.1159/000320526) Link : GDF5 prospec publication

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.

Precautions

GDF5 Human is for research use only and not for use in diagnostic or therapeutic procedures.

Target Information: (P43026)