

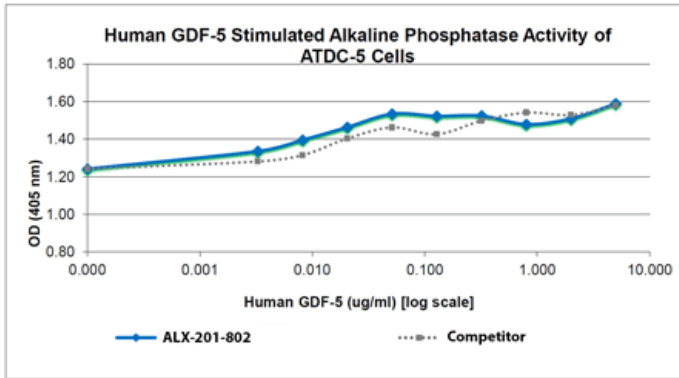
# Growth and differentiation factor-5 (human), (recombinant)

Growth and differentiation factor 5 (GDF-5) is a growth factor that regulates cell proliferation and differentiation in embryonic and adult tissues. GDF-5 is part of the TGF family of proteins and is closely related to the BMP family of proteins.

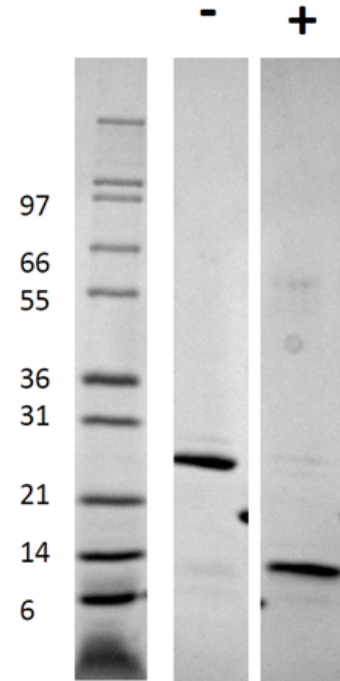
**Manuals, SDS & CofA**

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- High purity
- Carrier-free



**Figure 1: Human GDF-5 Bioactivity Data.** Serial dilutions of human GDF-5, starting at 5µg/ml, were added to ATDC-5 cells growing in the presence of 4µg/ml heparin. Alkaline phosphate activity was measure after 67 hours and the linear portion of the curve was us used to calculate the ED50. The ED50 for this specific lot Human GDF-5 was 0.01µg/ml. This value is comparable to the typical expected range of <1ng/ml.



**Figure 2:** 1µg in each lane (-) non-reducing conditions and (+) reducing conditions in a 4-20% TRIS-Glycine gel, stained with Coomassie Blue. Human GDF-5 is predicted to be a homodimer with a total MW of 26.8 kDa.

## Handling & Storage

<b>Use/Stability</b>	It is recommended that a carrier protein (0.1% HSA or BSA) is added for long term storage.
<b>Handling</b>	Centrifuge the vial before opening the cap. After reconstitution, prepare aliquots and store at -20°C.
<b>Long Term Storage</b>	-20°C
<b>Shipping</b>	Ambient Temperature

**Regulatory Status** RUO - Research Use Only

## Product Details

<b>Alternative Name</b>	GDF-5, CDMP-1, BMP-14, Bone morphogenetic protein 14, Cartilage-derived morphogenetic protein 1, LAP-4, LPS-associated protein 4, Radotermin
<b>Appearance</b>	White lyophilized (freeze-dried) powder.
<b>Biological Activity</b>	The activity is determined by the ability to induce alkaline phosphatase activity in ATDC5 cells which is typically observed at a concentration of 0.1-1µg/ml.
<b>Endotoxin Content</b>	≤1 EU/µg protein measured by kinetic LAL analysis.
<b>Formulation</b>	Lyophilized. Sterile filtered.
<b>MW</b>	~28.8kDa
<b>Purity</b>	≥98% (HPLC, Reducing and Non-reducing SDS-PAGE, UV spectroscopy at 280 nm)
<b>Reconstitution</b>	When reconstituting the product, gently pipet and wash down the sides of the vial to ensure full recovery of the protein into solution. It is recommended to reconstitute the lyophilized product with sterile water at a concentration of 0.1 mg/ml, which can be further diluted into other aqueous solutions.

**Source**

Produced in *E. coli*. Non-glycosylated homodimer, containing two 117 amino acids chains. To enable bacterial expression the N-terminal sequence of Ala-Pro-Leu-Thr was replaced with a Lys.

**UniProt ID**

P43026

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ENZO LIFE SCIENCES,  
INC.  
Phone: 800.942.0430  
[info-  
usa@enzolifesciences.com](mailto:info-usa@enzolifesciences.com)

European Sales Office  
ENZO LIFE SCIENCES  
(ELS) AG  
Phone: +41 61 926 8989  
[info-  
eu@enzolifesciences.com](mailto:info-eu@enzolifesciences.com)

Belgium, The Netherlands  
& Luxembourg  
Phone: +32 3 466 0420  
[info-  
be@enzolifesciences.com](mailto:info-be@enzolifesciences.com)

France  
Phone: +33 472 440 655  
[info-  
fr@enzolifesciences.com](mailto:info-fr@enzolifesciences.com)

Germany  
Phone: +49 7621 5500 526  
[info-  
de@enzolifesciences.com](mailto:info-de@enzolifesciences.com)

UK & Ireland  
Phone (UK customers):  
0845 601 1488  
Phone: +44 1392 825900  
[info-  
uk@enzolifesciences.com](mailto:info-uk@enzolifesciences.com)