



# Recombinant Mouse GDF-5

20201001BB



**FOR RESEARCH ONLY! NOT FOR HUMAN USE!**

<b>Cat.-no.:</b>	<b>M10-094</b>
Size:	50 µg
Lot. No.:	According to product label

## Scientific Background

<b>Gene-ID (NCBI):</b>	14563
<b>Synonyms:</b>	Gdf5; bp; brp; Cdmpl-1

GDF-5 is expressed in long bones during embryonic development and postnatally in articular cartilage. Mutations in the GDF-5 gene have been implicated in Hunter-Thompson type dwarfism and in Grebe Syndrome, which is characterized by short stature, extra digits, and short and deformed extremities. The mature and functional form of GDF-5 is a homodimer of two 120 amino acid polypeptide chains (monomers) linked by a single disulfide bond. Each GDF-5 monomer is expressed as the C-terminal part of a precursor polypeptide, which also contains a 27 amino acid signal peptide and a 348 amino acid propeptide. This precursor undergoes intracellular dimerization, and upon secretion it is processed by a furin-type protease. Recombinant Murine GDF-5 is a 27.0 kDa homodimeric disulfide-linked protein consisting of two 120 amino acid polypeptide chains.

### Sequence

APLANRQGKR PSKNLKARCS RKALHVNFKD MGWDDWIIAP  
LEYEAFHCEG LCEFPLRSHL EPTNHAVIQT LMNSMDEPST  
PPTCCVPTL SPISILFIDS ANNVVYKQYE DMVVESCGCR

### Database References

<b>Protein RefSeq:</b>	NP_032135.3
<b>Uniprot ID:</b>	P43028
<b>mRNA RefSeq:</b>	NM_008109.3

## Product Specifications

<b>Expressed in</b>	E. coli
<b>Purity</b>	> 98% by SDS-PAGE and HPLC analysis
<b>Formulation</b>	Lyophilized
<b>Length (aa):</b>	240 (Dimer)
<b>MW:</b>	27.0 kDa

**Stability:** The lyophilized protein is stable at room temperature for 1 month and at 4°C for 6 months. Reconstituted working aliquots are stable for 1 week at 2°C to 8°C and for 3 months at -20°C to -80°C.

**Reconstitution:** Centrifuge the vial prior to opening. Reconstitute in water to a concentration of 0.1-1.0 mg/ml. *Do not vortex.* This solution can be stored at 2-8°C for up to 1 week. For extended storage, it is recommended to further dilute in a buffer (e.g. PBS) containing a carrier protein (e.g. **0.1% BSA**) and store in working aliquots at -20°C to -80°C.



**AVOID REPEATED FREEZE AND THAW CYCLES!**

**Biological Activity:** The ED<sub>50</sub> was determined by its ability to induce alkaline phosphatase production by ATDC-5 chondrogenic cells is 0.08 – 1.2 µg/ml.