## Specifications and Uses:

**Alternate Names:** CDMP-1

**Description:**
Growth/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. Recombinant human GDF-5 is a non-glycosylated homodimer, containing two 117 amino acids chains, with a total molecular weight of 26.8 kDa. To enable bacterial expression the N-terminal sequence of Ala-Pro-Leu-Thr was replaced with a Lys.

**Source:** *E.coli*

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

**Formulation and Stability:**
Recombinant human GDF-5 is lyophilized with no additives.
Lyophilized product is very stable at -20°C. Reconstituted material should be aliquoted and frozen at -20°C. It is recommended that a carrier protein (0.1% HSA or BSA) is added for long term storage.

**Reconstitution:**
Centrifuge vial before opening. 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.

**Protein Content and Purity (typically ≥ 98%) determined by:**
HPLC, Reducing and Non-reducing SDS-PAGE, UV spectroscopy at 280 nm

**Endotoxin Level:**
Measured by kinetic LAL analysis and is typically ≤ 1 EU/μg protein.

**Biological Activity:**
The activity is determined by the ability to induce alkaline phosphatase activity in ATDC5 cells is typically 0.1-1 μg/mL.

**AA Sequence:**
APSATRQGKR PSKNLKARCS RKALHVNFKD MGWDDWIIAP LEYEAFHCEG LCEFPLRSHL EPTNHAVIQT
LMNSMDPEST PPTCCVPTRL SPISILFIDS ANNVVYKQYE DMVVESCGCR

**THIS PRODUCT IS FOR RESEARCH USE ONLY AND IS NOT FOR USE IN HUMANS!**