

## Recombinant Murine Growth Differentiation Factor 5/Bone Morphogenetic Protein-14

#R00285

Size: 10 µg/100 µg/500 µg

### Stability & Storage

Use a manual defrost freezer and avoid repeated freeze-thaw cycles.

- 12 months from date of receipt, -20 to -70 °C as supplied.
- 1 month, 2 to 8 °C under sterile conditions after reconstitution.
- 3 months, -20 to -70 °C under sterile conditions after reconstitution.



**Warning:** This product is intended for scientific research only. It is not to be used for medical or diagnostic procedures in humans or animals, nor as a food, cosmetic, or household product.

### Background

Growth/differentiation factors (GDF-1 to GDF-15) are members of the BMP family of TGF-beta superfamily proteins. They are produced as inactive preproteins which are then cleaved and assembled into active secreted homodimers. GDF dimers are disulfide-linked with the exception of GDF-3 and -9. GDF proteins are important during embryonic development, particularly in the skeletal, nervous, and muscular systems.

### AA Sequence

APLANRQGKRPSKNLKARCSRKALHVNFKDMGWDD  
WIIAPLEYEAFHCEGLCEFPLRSHLEPTNHAVIQTLMN  
SMDPESTPPTCCVPTRLSPISILFIDSANNVVKQYED  
MVVESCGR

### Reconstitution

We recommend that this vial be briefly centrifuged prior to opening to bring the contents to the bottom. Reconstitute in 4 mM HCl to a concentration of 0.1-1.0

mg/mL. Stock solutions should be apportioned into working aliquots and stored at ≤ -20 °C. Further dilutions should be made in appropriate buffered solutions.

### Product Specification

|                            |                                                                                                                                                                                                                                         |
|----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Accession</b>           | P43027                                                                                                                                                                                                                                  |
| <b>GeneID</b>              | 14563                                                                                                                                                                                                                                   |
| <b>Species</b>             | Murine                                                                                                                                                                                                                                  |
| <b>Source</b>              | Escherichia coli.                                                                                                                                                                                                                       |
| <b>Molecular Weight</b>    | Approximately 27.2 kDa, a disulfide-linked homodimeric protein containing two 120 amino acids.                                                                                                                                          |
| <b>Purity</b>              | > 96 % by SDS-PAGE and HPLC analyses.                                                                                                                                                                                                   |
| <b>Biological Activity</b> | Fully biologically active when compared to standard. The ED <sub>50</sub> as determined by inducing alkaline phosphatase production of murine ATDC5 cells is less than 1.0 µg/ml, corresponding to a specific activity of > 1000 IU/mg. |

|             |                                                                                                    |
|-------------|----------------------------------------------------------------------------------------------------|
| Physical    | Sterile Filtered White lyophilized                                                                 |
| Appearance  | (freeze-dried) powder.                                                                             |
| Formulation | Lyophilized from a 0.2 µm<br>filtered concentrated solution in<br>30 % Acetonitrile and 0.1 % TFA. |
| Endotoxin   | Less than 0.1 EU/µg of<br>rMuGDF-5/BMP-14 as<br>determined by LAL method.                          |