

## Recombinant Mouse Growth Differentiation Factor 7/Bone Morphogenetic Protein-12 (Mouse GDF-7/BMP-12)

### Product Information

Product Name	Cat#	Size
Recombinant Mouse Growth Differentiation Factor 7/Bone Morphogenetic Protein-12 (Mouse GDF-7/BMP-12)	92004ES10	10 µg
	92004ES60	100 µg
	92004ES76	500 µg

### Product Description

Growth/differentiation factors (GDF-1 to GDF-15) are members of the BMP family of TGF-beta superfamily proteins. At the amino acid level, mature human GDF-7 shares 85% and 88% aa sequence identity with mature GDF-7 in mouse and rat. 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. GDF-7 is involved in tendon and ligament formation and repair. GDF-7 also regulates bone formation, mesenchymal stem cell differentiation, neuronal differentiation, and axon guidance in the central nervous system.

### Product Properties

<b>Synonyms</b>	BMP12, GDF7, growth differentiation factor 7
<b>Accession</b>	P43029
<b>GeneID</b>	238057
<b>Source</b>	E.coli-derived mouse GDF-7/BMP-12 protein, Thr316-Arg461.
<b>Molecular Weight</b>	Approximately 29.8 kDa.
<b>AA Sequence</b>	TALAGTRGAQ GSGGGGGGGG GGGGGGGGGG GGAGRGHGRR GRSRCSRKSL HVDFKELGWD DWIAPLDYE AYHCEGVCDF PLRSHLEPTN HAIQTLNLS MAPDAAPASC CVPARLSPIS ILYIDAANNV VYKQYEDMVV EACGCR
<b>Tag</b>	None
<b>Physical Appearance</b>	Sterile Filtered White lyophilized (freeze-dried) powder.
<b>Purity</b>	>95% by SDS-PAGE and HPLC analyses.
<b>Biological Activity</b>	The ED <sub>50</sub> as determined by inducing alkaline phosphatase production of mouse ATDC5 cells is less than 0.5 µg/mL, corresponding to a specific activity of > 2000 IU/mg. Fully biologically active when compared to standard.
<b>Endotoxin</b>	< 0.1 EU per 1µg of the protein by the LAL method.
<b>Formulation</b>	Lyophilized from a 0.2 µm filtered concentrated solution in 30% Acetonitrile and 0.1% TFA.
<b>Reconstitution</b>	We recommend that this vial be briefly centrifuged prior to opening to bring the contents to the bottom. Reconstitute in sterile distilled water or aqueous buffer containing 0.1% BSA 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.

### Shipping and Storage

The products are shipped with ice pack and can be stored at -20°C to -80°C for 1 year.

Recommend to aliquot the protein into smaller quantities when first used and avoid repeated freeze-thaw cycles.

## **Cautions**

1. Avoid repeated freeze-thaw cycles.
2. For your safety and health, please wear lab coats and disposable gloves for operation.
3. For research use only!