



## Genorise® Recombinant Equine FGF Basic Protein DataSheet

Catalog Number: GR104325

### Background

Basic fibroblast growth factor, also known as bFGF, FGF2 or FGF- $\beta$ , is a member of the fibroblast growth factor family (1). In normal tissue, basic fibroblast growth factor is present in basement membranes and in the subendothelial extracellular matrix of blood vessels. It stays membrane-bound as long as there is no signal peptide. It has been hypothesized that, during both wound healing of normal tissues and tumor development, the action of heparan sulfate-degrading enzymes activates bFGF, thus mediating the formation of new blood vessels, a process known as angiogenesis. bFGF has been shown in preliminary animal studies to protect the heart from injury associated with a heart attack, reducing tissue death and promoting improved function after reperfusion (2). Recent evidence has shown that low levels of FGF2 play a key role in the incidence of excessive anxiety. Basic fibroblast growth factor has been shown to interact with casein kinase 2, alpha 1(3), RPL6 (4) and ribosomal protein S19 (5).

### References

1. Kim HS (1998). Cytogenet. Cell Genet. 83 (1-2): 73.
2. House SL, et al. (2003). Circulation 108 (1): 3140.
3. Skjerpen, et al. EMBO J. (England) 21 (15): 4058.
4. Shen, B, et al. Biochem. Biophys. Res. Commun. (UNITED STATES) 252 (2): 524.
5. Soulet, F, et al. Biochem. Biophys. Res. Commun. (United States) 289 (2): 591.

### DECLARATION

THIS REAGENT IS FOR IN VITRO LABORATORY TESTING AND RESEARCH USE ONLY. DO NOT USE IT FOR CLINICAL DIAGNOSTICS. DO NOT USE OR INJECT IT IN HUMANS AND ANIMALS.

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### Description

**Source:** *E coli*- derived

**Composition:** Ser5 –Ser155

**Accession #** NP\_001182150.1

**N-terminal Sequence Analysis:** Ser5

**Predicted Molecular Mass:** 17 kDa

### Specifications

**SDS-PAGE:** 17 kDa, reducing conditions

**Activity** Measured in a cell proliferation assay using NR6R-3T3 mouse fibroblast cells. Raines EW et al. (1985) Methods Enzymol. 109:749.

The ED<sub>50</sub> for this effect is typically 0.1-0.6 ng/mL

The specific activity of Recombinant Equine FGF Basic is approximately 790 IU/μg, which is calibrated against recombinant human FGF Basic WHO International Standard (NIBSC code: 90/712).

**Endotoxin Level:** <0.1 EU per 1 μg of the protein by the LAL method.

**Purity:** >95%, by SDS-PAGE visualized by silver stain and quantitatively densitometry by coomassie blue staining.

**Formulation:** Lyophilized from a 0.2 μm filtered PBS solution with BSA as a carrier protein.

### Preparation and Storage

**Reconstitution:** Reconstitute at 20-100 μg/mL in sterile PBS.

**Shipping** The product is shipped at ambient temperature or in a foam box with ice pad for international. Upon receipt, store it immediately at the temperature recommended below.

**Stability & Storage:** Use a manual defrost freezer and avoid repeated freeze thaw cycles.

- 3 months, -20 °C as supplied.
- 1 month, -20 to -70°C under sterile conditions after reconstitution.

### Related products

1. GR238016 50 ml Reagent Reservoir, 100/case, 5 packs/case (pack of 20)
2. GR238004 Tissue Culture 96-well Microplate, individually packed, Case of 50
3. GR238019 1.5 ml Microcentrifuge tube with screw cap and free-standing, pack of 500
4. GR238007 125 ml leak-resistant HDPE bottle, colorless, pack of 24
5. GR238002 Microplate 12x8-Well Strip High Binding, Case of 50
6. GR238003 Microplate 12x8-Well Strip Medium Binding, Case of 50
7. GR238032 42592 Costar Stripwell Microplate 1 x 8 Flat Bottom, High Binding, Case of 100
8. GR238001 468667 Thermo Microplate 12x8-Well Strip Nunc Maxisorp F8, Case of 60
9. GR238031 96-well microplate sealer plastic, pack of 100