

## Product Information

## Fibroblast Growth Factor-4

Human, Recombinant Expressed in *E. coli***F8424**

Storage Temperature –20 °C

Synonym: hFGF-4, FGF-4, K-FGF, Transforming protein KS3, HBGF-4, HST-1

### Product Description

Fibroblast Growth Factor-4 (FGF-4), of the fibroblast growth factor family, is encoded by the K-fgf/hst oncogene. FGF-4 is also known as hst-1 (from human stomach tumor), and K-FGF (from Kaposi's sarcoma). The K-fgf/hst oncogene was originally identified by transfection into NIH3T3 cells with DNA from stomach and colon cancer,<sup>1, 2, 3</sup> Kaposi's sarcoma,<sup>4, 5</sup> and hepatocellular carcinoma.<sup>6</sup> The activation of the K-fgf oncogene results from unregulated expression of a normal gene product.<sup>7</sup> Unlike the two prototypes of the FGF family, FGF basic (FGF-2) and FGF acidic (FGF-1), FGF-4 is glycosylated and secreted by cells into culture medium.<sup>5</sup>

Fibroblast cell lines expressing FGF-4 acquire a transformed phenotype *in vitro* and are highly tumorigenic *in vivo*.<sup>8</sup> FGF-4 is a potent mitogen for fibroblasts in culture and has features of a transforming growth factor.<sup>8</sup> In addition, FGF-4 is mitogenic for endothelial cells and will cause morphological transformation of NIH3T3 cells.<sup>4, 5, 7</sup> FGF-4 shares 42% sequence identity with FGF-basic (FGF-2),<sup>9</sup> and both FGF-basic and FGF-4 bind to the same receptors.<sup>10, 11</sup> Recombinant FGF-4 is a monomer, 19.4 kDa (177 aa) protein containing 182 amino acid residues.

### Reagent

Lyophilized from a 0.2 µm filtered solution containing 20 mM sodium phosphate, 0.5 M sodium chloride, pH 7.5.

### Storage/Stability

The lyophilized product is stable for a few weeks at room temperature, but is best stored at –20 °C. After reconstitution, store in working aliquots at –20 °C. Repeated freeze/thaw cycles will result in some loss of activity.

### Reconstitution and Use

Reconstitute in Sterile water at 0.1 mg/mL. This solution can then be diluted into other aqueous buffers and stored at 2–8 °C for up to one week. For extended use, the reconstituted product should be stored in working aliquots at –20 °C. Repeated freezing and thawing is not recommended.

### Product Profile

The biological activity is measured by its ability to stimulate NR6R-3T3 cell proliferation.

The ED<sub>50</sub> is defined as the effective concentration of growth factor that elicits a 50% increase in cell growth in a cell-based bioassay.

Purity: ≥ 95% by SDS-PAGE and HPLC

Endotoxin: ≤ 0.1 EU/µg (LAL test)

## References

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23182340pis Rev 02/25

