

FGF-basic

Catalog # PVGS1338

Product Information

Primary Accession P09038
Species Human

Sequence Pro143-Ser288

Purity > 95% as analyzed by SDS-PAGE

Endotoxin Level

Expression System E. coli

Formulation Lyophilized after extensive dialysis against PBS.

Reconstitution It is recommended that this vial be briefly centrifuged prior to opening to

bring the contents to the bottom. Reconstitute the lyophilized powder in

ddH₂O up to 50 ☐g/ml.

Storage & Stability Upon receiving, this product remains stable for up to 6 months at lower than

-70°C. Upon reconstitution, the product should be stable for up to 1 week at 4°C or up to 3 months at -20°C. For long term storage it is recommended that a carrier protein (example 0.1% BSA) be added. Avoid repeated freeze-thaw

cycles.

Additional Information

Gene ID 2247

Other Names Fibroblast growth factor 2, FGF-2, Basic fibroblast growth factor, bFGF,

Heparin-binding growth factor 2, HBGF-2, FGF2, FGFB

Target Background Fibroblast Growth Factor-basic (FGF-basic), also known as FGF-2, is a

pleiotropic cytokine and one of the prototypic members of the

heparin-binding FGF family. Like other FGF family members, FGF-basic has the

 β trefoil structure. In vivo, FGF-basic is produced by a variety of cells,

including cardiomycotes, fibroblasts, and vascular cells. FGF-basic regulates a variety of processes including cell proliferation, differentiation, survival, adhesion, motility, apoptosis, limb formation and wound healing. FGF-basic

can be tumorigenic due to its role in angiogenesis and blood vessel remodeling. The angiogenic effects of FGF-basic can produce beneficial

cardioprotection during acute heart injury.

Protein Information

Name FGF2

Synonyms FGFB

Function Acts as a ligand for FGFR1, FGFR2, FGFR3 and FGFR4 (PubMed: <u>8663044</u>). Also

acts as an integrin ligand which is required for FGF2 signaling

(PubMed: 28302677). Binds to integrin ITGAV: ITGB3 (PubMed: 28302677). Plays

an important role in the regulation of cell survival, cell division, cell differentiation and cell migration (PubMed:<u>28302677</u>, PubMed:<u>8663044</u>). Functions as a potent mitogen in vitro (PubMed:<u>1721615</u>, PubMed:<u>3732516</u>,

PubMed:<u>3964259</u>). Can induce angiogenesis (PubMed:<u>23469107</u>, PubMed:<u>28302677</u>). Mediates phosphorylation of ERK1/2 and thereby promotes retinal lens fiber differentiation (PubMed:<u>29501879</u>).

Cellular Location Secreted. Nucleus. Note=Exported from cells by an endoplasmic reticulum

(ER)/Golgi-independent mechanism. Unconventional secretion of FGF2 occurs by direct translocation across the plasma membrane (PubMed:20230531). Binding of exogenous FGF2 to FGFR facilitates endocytosis followed by translocation of FGF2 across endosomal membrane into the cytosol (PubMed:22321063). Nuclear import from the cytosol requires the classical nuclear import machinery, involving proteins KPNA1 and KPNB1, as well as

CEP57 (PubMed:22321063)

Tissue Location Expressed in granulosa and cumulus cells. Expressed in hepatocellular

carcinoma cells, but not in non-cancerous liver tissue.

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