

FGF-basic
Catalog # PVGS1447

Specification

FGF-basic - Product Information

Primary Accession [P09038](#)
Species
Human

Sequence
Ala144-Ser288

Purity
> 95% as analyzed by SDS-PAGE

Endotoxin Level
< 0.2 EU/ µg of protein by gel clotting method

Biological Activity
ED₅₀ < 0.25 ng/ml, measured by the cell proliferation assay using 3T3 cells, corresponding to a specific activity of > 4.0 × 10⁶ units/mg

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 or PBS up to 100 µg/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.

FGF-basic - 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

cardiomyocytes, 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.

FGF-basic - Protein Information

Name FGF2

Synonyms FGFB

Function

Acts as a ligand for FGFR1, FGFR2, FGFR3 and FGFR4 (PubMed:8663044). 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:28302677, PubMed:8663044). Functions as a potent mitogen in vitro (PubMed:1721615, PubMed:3732516, PubMed:3964259). Can induce angiogenesis (PubMed:23469107, PubMed:28302677). Mediates phosphorylation of ERK1/2 and thereby promotes retinal lens fiber differentiation (PubMed:29501879).

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.

FGF-basic - Protocols

Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)

- [Flow Cytometry](#)
- [Cell Culture](#)

FGF-basic - Images