

FGF-2 Protein, Human, Recombinant (Modified)

General Information

Synonyms:	FGF-2; Fibroblast growth factor 2; Heparin-binding growth factor 2; Basic fibroblast growth factor; bFGF; HBGF-2; FGF2; FGFB
Protein Construction:	Met1-Ser155
Species:	Human
Expression Host:	E. coli
Accession:	P09038-2
Molecular Weight:	17.2 kDa (Predicted); 16 kDa (reducing condition)
AA Sequence:	Met1-Ser155

QC Testing

Biological Activity:	Measured by its ability to induce FGF reporter activity in 293T human embryonic kidney cells. The ED50 for this effect is 0.46 ng/mL.
Purity:	Greater than 95% as determined by reducing SDS-PAGE. (QC verified)
Endotoxin:	< 0.1 EU/μg as determined by LAL test.
Formulation:	Lyophilized from a solution filtered through a 0.22 μm filter, containing 20 mM Tris, 5% sucrose, 0.02% Tween 80, pH 8.0.

Preparation and Storage

Reconstitution:

Reconstitute the lyophilized protein in distilled water. The product concentration should not be less than 100 μg/ml. Before opening, centrifuge the tube to collect powder at the bottom. After adding the reconstitution buffer, avoid vortexing or pipetting for mixing.

Stability & Storage:

Lyophilized powders can be stably stored for over 12 months, while liquid products can be stored for 6-12 months at -80°C. For reconstituted protein solutions, the solution can be stored at -20°C to -80°C for at least 3 months. Please avoid multiple freeze-thaw cycles and store products in aliquots.

Actual storage temperature shall be subject to the COA.

Shipping:

In general, lyophilized powders are shipped with blue ice, while solutions are shipped with dry ice.

Protein Background

Fibroblast growth factors (FGF) are a family of heparin-binding secreted proteins that stimulate cell proliferation and differentiation in a wide variety of tissues. FGFs play important roles in diverse biological functions both in vivo and in vitro, including mitogenesis, cellular migration, differentiation, angiogenesis, and wound healing. Human embryonic stem cell (hESC) cultures require FGF basic (also known as FGF-2 or bFGF) in cell culture media.

to remain in an undifferentiated and pluripotent state. Thermostable FGF basic was engineered for enhanced stability in culture media, without modification of its biological function. FGF basic is a required component of stem cell culture media for maintaining cells in an undifferentiated state. Because FGF basic is unstable, daily media changes are needed. The thermostable FGF basic that supports a 2-day media change schedule, so no media changes are required over a weekend. This thermostable FGF basic was more stable than FGF basic in biochemical studies, and maintained cell growth, pluripotency and differentiation potential with a 2-day feeding schedule.

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