

KGF, human, recombinant

Catalog Number: IK0600

Available sizes: 10 µg, 50 µg, 100 µg, 1 mg, 5 mg

DESCRIPTION

Keratinocyte Growth Factor (KGF, FGF-7, HBGF-7) is a member of the FGF family of 23 related mitogenic proteins. These proteins play a central role during embryonic development and postnatal growth and tissue repair, by promoting cellular proliferation and differentiation. KGF specifically stimulates epithelial cells and keratinocytes, it is the most potent growth factor identified thus far for skin keratinocytes. KGF takes part in the development of kidney and lung, angiogenesis and has a key role in wound healing following skin injuries. It shows considerable species cross-reactivity (mouse, monkey, porcine cells) as the other members of the FGF family.

SOURCE

Produced in the endosperm tissue of barley grain (*Hordeum vulgare*). ISOkine® growth factors and cytokines are animal-free and serum-free and void of antibiotics, bacterial endotoxins, viruses, and prions.

FORMULATION

2xPBS pH 7.2, sterile filtered through 0.2 µm filter.

PURITY

Greater than 95% by SDS-PAGE gel analysis.

RECONSTITUTION

Note: Always centrifuge the vial before opening. It is recommended to reconstitute the lyophilized protein in sterile buffered saline to a concentration of no less than 100 µg/ml. For long term storage of the reconstituted solution it is recommended to add a carrier protein (0.1% HSA or BSA).

STABILITY

The lyophilized protein, though stable at room temperature for few weeks, is best stored at -20°C. Reconstituted protein should be used immediately or stored in working aliquots at -20°C. Avoid repeated freeze-thaw cycles.

BIOLOGICAL ACTIVITY

Each batch of ISOkine® growth factor is tested for bioactivity and verified to have comparable activity to a commercial source. The bioactivity of ISOkine® recombinant human KGF was determined by its dose dependent effect on proliferation of 4MBr5 rhesus monkey epithelial cells. The ED50 for this effect is typically below 10 ng/ml corresponding to specific activity of > 1 x 10⁵ U/mg. Optimal concentration should be determined for specific applications and cell lines.

ENDOTOXIN LEVEL

Endotoxin level is less than 0.005ng per µg of ISOkine® product (0.05EU/µg).

MAT ASSAY

Purified ISOkine® product carries no pyrogenic or pro-inflammatory contaminants, as assayed with monocyte activation test using Human 10-plex Cytokine Assay measuring IL-6, TNF-alpha and IL-1beta induction.**

** Ref. The Blood Bank, University Hospital of Iceland, Reykjavik, Iceland.

MOLECULAR WEIGHT

Recombinant human KGF contains 164 amino acids and a 16 a.a. histidine-based tag for a total length of 180 a.a. and has a predicted molecular mass of 21.2 kDa including his-tag. As a result of glycosylation, the recombinant protein migrates as two bands with an apparent molecular mass of 26 and 28 kDa in SDS-PAGE.