### Overview

<table>
<thead>
<tr>
<th>Product name</th>
<th>Recombinant human FGF2 protein (Active)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Protein length</td>
<td>Full length protein</td>
</tr>
</tbody>
</table>

### Description

<table>
<thead>
<tr>
<th>Nature</th>
<th>Recombinant</th>
</tr>
</thead>
<tbody>
<tr>
<td>Source</td>
<td>Escherichia coli</td>
</tr>
</tbody>
</table>

#### Amino Acid Sequence

<table>
<thead>
<tr>
<th>Accession</th>
<th>P09038</th>
</tr>
</thead>
<tbody>
<tr>
<td>Species</td>
<td>Human</td>
</tr>
<tr>
<td>Sequence</td>
<td>AAGSITTLP ALPEDGGSGA FPPGHFKDPK RLYCKNGFF LRHPDGRVD GVREKSDPHI KLQLQAEERG VVSIGVCAN RYLAMKEDGR LLASKCVTDE CFFFERLESN NYNTYRSRKY TSWYVALKRT GQYKLGSKTG PGQKAILFLP MSAKS</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Molecular weight</th>
<th>17 kDa</th>
</tr>
</thead>
<tbody>
<tr>
<td>Amino acids</td>
<td>2 to 155</td>
</tr>
</tbody>
</table>

### Specifications

Our Abpromise guarantee covers the use of ab9596 in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

#### Biological activity

Determined by a cell proliferation assay using Balb/c 3T3 cells.

The expected ED$_{50}$ is ≤ 0.1 ng/ml, corresponding to a specific activity of ≥ 1 x 10$^7$ units/mg.

#### Applications

- Cell differentiation
- SDS-PAGE
- Cellular Activation
- HPLC

#### Endotoxin level

< 1.000 Eu/µg

#### Purity

≥ 95 % SDS-PAGE.
>= 95% HPLC Sterile filtered

Form
Lyophilised

Preparation and Storage

Stability and Storage
Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C or -80°C. Avoid freeze / thaw cycle.

pH: 7.60
Constituents: 0.0605% Tris, 0.87% Sodium chloride

This product is an active protein and may elicit a biological response in vivo, handle with caution.

Reconstitution
Please reconstitute this product in 500ul 5mM Tris, pH7.6.

General Info

Function
Plays an important role in the regulation of cell survival, cell division, angiogenesis, cell differentiation and cell migration. Functions as potent mitogen in vitro. Can induce angiogenesis (PubMed:23469107).

Tissue specificity
Expressed in granulosa and cumulus cells. Expressed in hepatocellular carcinoma cells, but not in non-cancerous liver tissue.

Sequence similarities
Belongs to the heparin-binding growth factors family.

Post-translational modifications
Phosphorylation at Tyr-215 regulates FGF2 unconventional secretion.
Several N-termini starting at positions 94, 125, 126, 132, 143 and 162 have been identified by direct sequencing.

Cellular localization
Secreted. Nucleus. Exported from cells by an endoplasmic reticulum (ER)/Golgi-independent mechanism. Unconventional secretion of FGF2 occurs by direct translocation across the plasma membrane. Binding of exogenous FGF2 to FGFR facilitates endocytosis followed by translocation of FGF2 across endosomal membrane into the cytosol. Nuclear import from the cytosol requires the classical nuclear import machinery, involving proteins KPNA1 and KPNB1, as well as CEP57.

Images

Standard Curve for FGF basic (Analyte: FGF basic protein (Active) (ab9596)); dilution range 1pg/ml to 1ug/ml using Capture Antibody Mouse monoclonal [AS24] to FGF basic (ab17279) at 1ug/ml and Detector Antibody Rabbit monoclonal [EP1735] to FGF basic (ab92337) at 0.5ug/ml.
Human embryonic stem cells (H9) were differentiated both as embryoid bodies and monolayer cultures (on Matrigel) using a protocol described in Kennedy et al., 2007. BMP-4, FGF-basic (ab9596) and VEGF (ab9571) were sequentially added to the media to direct differentiation. These images were taken at day 8, where cell adhesion antigens CD31 (ab32457 in green) and CD34 (ab8536 in red) are abundant and represent primitive haematopoietic cells within the culture. Dapi staining is shown in blue.

Please note: All products are "FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES"

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- Response to your inquiry within 24 hours
- We provide support in Chinese, English, French, German, Japanese and Spanish
- Extensive multi-media technical resources to help you
- We investigate all quality concerns to ensure our products perform to the highest standards

If the product does not perform as described on this datasheet, we will offer a refund or replacement. For full details of the Abpromise, please visit https://www.abcam.com/abpromise or contact our technical team.

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