

## Product datasheet

### Recombinant human FGF2 protein (Active) ab9596

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#### Description

|                                   |  |
|-----------------------------------|--|
| <b>Product name</b>               | Recombinant human FGF2 protein (Active)  |
| <b>Biological activity</b>        | Determined by a cell proliferation assay using Balb/c 3T3 cells.<br>The expected <b>ED</b> <sub>50</sub> is ≤ 0.1 ng/ml, corresponding to a specific activity of ≥ 1 x 10 <sup>7</sup> units/mg. |
| <b>Purity</b>                     | ≥ 95 % SDS-PAGE.<br>≥ 95% HPLC Sterile filtered  |
| <b>Endotoxin level</b>            | < 1.000 Eu/μg  |
| <b>Expression system</b>          | Escherichia coli   |
| <b>Accession</b>                  | <b><u>P09038</u></b>   |
| <b>Protein length</b>             | Full length protein  |
| <b>Animal free</b>                | No   |
| <b>Nature</b>                     | Recombinant  |
| <b>Species</b>                    | Human  |
| <b>Sequence</b>                   | AAGSITLTP ALPEDGGSGA FPPGHFKDPK<br>RLYCKNGGFF LRIHPDGRVD GVREKSDPHI<br>KLQLQAEERG VVSIKGVCAN RYLAMKEDGR<br>LLASKCVTDE CFFFERLESN NYNTYRSRKY<br>TSWYVALKRT GQYKLGSKTG PGQKAILFLP MSAKS            |
| <b>Predicted molecular weight</b> | 17 kDa   |
| <b>Amino acids</b>                | 135 to 288   |

#### 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.

|                     |   |
|---------------------|---|
| <b>Applications</b> | Cell Differentiation<br>SDS-PAGE<br>Cellular Activation<br>HPLC |
| <b>Form</b>         | Lyophilized   |

## 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.

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

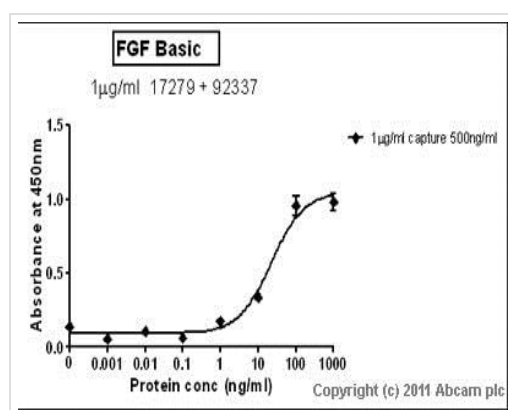
Phosphorylation at Tyr-215 regulates FGF2 unconventional secretion.

Several N-termini starting at positions 94, 125, 126, 132, 143 and 162 have been identified by direct sequencing.

### Cellular localization

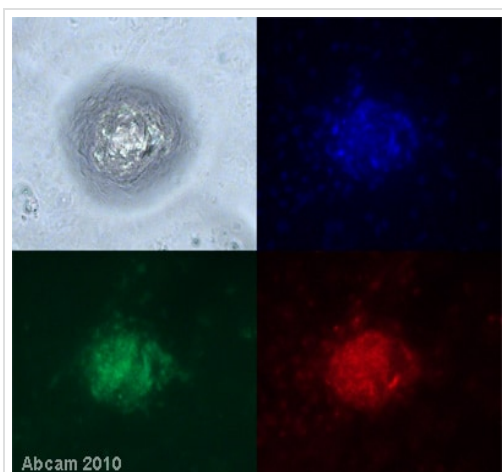
Secreted. Nucleus. Exported from cells by an endoplasmic reticulum (ER)/Golgi-independent mechanism. Unconventional secretion of FGF2 occurs by direct translocation across the plasma membrane. Binding of exogenous FGF2 to FGFR facilitates endocytosis followed by translocation of FGF2 across endosomal 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.

Sandwich ELISA - Recombinant human FGF2 protein (ab9596)



Cell differentiation - Recombinant human FGF2 protein (ab9596)

This image is courtesy of Sun Yung, Centro de Investigación Príncipe Felipe.

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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