



## Fibroblast Growth Factor 21 Human, Rabbit Polyclonal Antibody

### Product Data Sheet

**Source of Antigen:** *E.coli*

**Host:** Rabbit

**Cat. No.:**

RD181108100 (0.1 mg)

**Other names:** FGF-21, UNQ3115/PRO10196

### Research topic

Animal studies, Energy metabolism and body weight regulation

### Preparation

The antibody was raised in rabbits against recombinant Human FGF-21.

### Amino Acid Sequence

The immunization antigen (20.1 kDa) is a protein containing 195 AA of recombinant Human FGF-21. N-terminal His-tag, 14 extra AA (highlighted).

**MRGSHHHHHH** GMASHPIPDS SPLLQFGGQV RQRYLYTDDA QQTEAHLEIR EDGTVGGAAD QSPESLLQLK ALKPGVIQIL  
GVKTSRFLCQ RPDGALYGSL HFDPEACSFH ELLLEDGYNV YQSEAHGLPL HLPGNKSPHR DPAPRGPARG LPLPGLPPAP  
PEPPGILAPQ PPDVGSSDPL SMVGPSQGRS PSYAS

### Species Reactivity

Human

Not yet tested in other species.

### Purification Method

Immunoaffinity chromatography on a column with immobilized recombinant Human FGF-21.

### Antibody Content

0.1 mg (determined by BCA method, BSA was used as a standard)

### Formulation

The antibody is lyophilized in 0.05 M phosphate buffer, 0.1 M NaCl, pH 7.2. **AZIDE FREE.**

### Reconstitution

Add 0.1 ml of deionized water and let the lyophilized pellet dissolve completely. Slight turbidity may occur after reconstitution, which does not affect activity of the antibody. In this case clarify the solution by centrifugation.

### Shipping

At ambient temperature. Upon receipt, store the product at the temperature recommended below.

### Storage/Stability

The lyophilized antibody remains stable and fully active until the expiry date when stored at -20°C. Aliquot the product after reconstitution to avoid repeated freezing/thawing cycles and store frozen at -80°C. Reconstituted antibody can be stored at 4°C for a limited period of time; it does not show decline in activity after one week at 4°C.

### Expiration

See vial label.

### Lot Number

See vial label.

### Quality Control Test

Indirect ELISA - to determine titer of the antibody

## **Applications**

ELISA, Western blotting

## **Introduction to the Molecule**

The FGFs are a family of more than 20 small (~17-26 kDa) secreted peptides. The initial characterization of these proteins focused on their ability to stimulate fibroblast proliferation. This mitogenic activity was mediated through FGF receptors (FGFRs) 1, 2, or 3. A fourth closely related tyrosine kinase receptor (FGFR4) was able to bind the FGFs but did not lead to a mitogenic response.

FGFs modulate cellular activity via at least 5 distinct subfamilies of high-affinity FGF receptors (FGFRs): FGFR-1, -2, -3, and -4, all with intrinsic tyrosine kinase activity and, except for FGFR-4, multiple splice isoforms, and FGFR-5, which lacks an intracellular kinase domain. There is growing evidence that FGFRs can be important for regulation of glucose and lipid homeostasis. The overexpression of a dominant negative form of FGFR-1 in beta cells leads to diabetes in mice, which thus implies that proper FGF signaling is required for normal beta cell function and glycemia maintenance. FGFR-2 appears to be a key molecule during pancreatic development. Moreover, FGFR-4 has been implicated in cholesterol metabolism and bile acid synthesis.

FGF-19, has been shown to cause resistance to diet-induced obesity and insulin desensitization and to improve insulin, glucose, and lipid profiles in diabetic rodents. Since these effects, at least in part, are mediated through the observed changes in metabolic rates, FGF-19 can be considered as a regulator of energy expenditure.

FGF-21 is preferentially expressed in liver, but an exact knowledge of FGF-21 bioactivity and its mode of action have been lacking to date. FGF-21 is a potent activator of glucose uptake on adipocytes, protects animals from diet-induced obesity when overexpressed in transgenic mice, and lowers blood glucose and triglyceride levels when therapeutically administered to diabetic rodents.

## **Note**

This product is for research use only.