

## FGFRL1 Protein, Mouse, Recombinant (His)

### General Information

Synonyms:	FGFR5 $\beta$ ;FGFR5 $\gamma$ ;fibroblast growth factor receptor-like 1;FGFR5gamma;FGFR5beta;FGFR5
Protein Construction:	A DNA sequence encoding the extracellular domain of mouse FGFRL1 (NP_473412.1) (Met 1-Pro 374) precursor was expressed, with a C-terminal polyhistidine tag. Predicted N terminal: Ala 21
Species:	Mouse
Expression Host:	HEK293 Cells
Accession:	Q91V87-1
Molecular Weight:	40.4 kDa (predicted); 55-60 kDa (reducing conditions)

### QC Testing

Biological Activity:	Measured by its binding ability in a functional ELISA.1. Immobilized mouse at 10 $\mu\text{g/ml}$ (100 $\mu\text{l/well}$ ) can bind mouse FGFR5. The EC50 of mouse FGFR5 is 0.34 $\mu\text{g/ml}$ .2. Immobilized human FGF1 at 10 $\mu\text{g/ml}$ (100 $\mu\text{l/well}$ ) can bind mouse FGFR5 with a linear range of 0.08-2 $\mu\text{g/ml}$ .3. Immobilized human bFGF at 5 $\mu\text{g/ml}$ (100 $\mu\text{l/well}$ ) can bind mouse FGFR5. The EC50 of mouse FGFR5 is 0.22 $\mu\text{g/ml}$ .
Purity:	> 90 % as determined by SDS-PAGE
Endotoxin:	< 1.0 EU/ $\mu\text{g}$ of the protein as determined by the LAL method.
Formulation:	Lyophilized from a solution filtered through a 0.22 $\mu\text{m}$ filter, containing PBS, pH 7.4. Typically, a mixture containing 5% to 8% trehalose, mannitol, and 0.01% Tween 80 is incorporated as a protective agent before lyophilization.

### Preparation and Storage

**Reconstitution:**  
A Certificate of Analysis (CoA) containing reconstitution instructions is included with the products. Please refer to the CoA for detailed information.

#### Stability & Storage:

It is recommended to store recombinant proteins at  $-20^{\circ}\text{C}$  to  $-80^{\circ}\text{C}$  for future use. Lyophilized powders can be stably stored for over 12 months, while liquid products can be stored for 6-12 months at  $-80^{\circ}\text{C}$ . For reconstituted protein solutions, the solution can be stored at  $-20^{\circ}\text{C}$  to  $-80^{\circ}\text{C}$  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 factor receptor-like 1 (FGFRL1) also known as Fibroblast growth factor receptor 5 (FGFR5), is a member of the fibroblast growth factor receptor (FGFR) family, where amino acid sequence is highly conserved between members and throughout evolution. A full-length representative protein would consist of an extracellular region, composed of three immunoglobulin-like domains, a single hydrophobic membrane-spanning segment and a cytoplasmic tyrosine kinase domain. The extracellular portion of the protein interacts with fibroblast growth factors, setting in motion a cascade of downstream signals, ultimately influencing mitogenesis and differentiation. A unique feature of FGFRL1/FGFR5 is that it does not contain an intracellular tyrosine kinase domain. Some muscle types, including the muscles of the tongue and the diaphragm, express FGFRL1/FGFR5 at relatively high level. In contrast, the heart and the skeletal muscles of the limbs, as well as many other organs (brain, lung, liver, kidney, gut) express Fgfr1 only at basal level. It is conceivable that FGFRL1/FGFR5 interacts with other Fgfrs, which are expressed in cartilage and muscle, to modulate FGF signaling. Cancer Immunotherapy Immune Checkpoint Immunotherapy Targeted Therapy

### Reference

- Wiedemann M, et al. (2000) Characterization of a novel protein (FGFRL1) from human cartilage related to FGF receptors. *Genomics*. 69(2): 275-9.
- Trueb B, et al. (2006) Expression of FGFRL1, a novel fibroblast growth factor receptor, during embryonic development. *Int J Mol Med*. 17(4): 617-20.
- Wiedemann M, et al. (2001) The mouse Fgfr1 gene coding for a novel FGF receptor-like protein. *Biochim Biophys Acta*. 1520(3): 247-50.
- Trueb B, et al. (2003) Characterization of FGFRL1, a novel fibroblast growth factor (FGF) receptor preferentially expressed in skeletal tissues. *J Biol Chem*. 278(36): 33857-65.

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