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# FGF-R4

Catalog # PVGS1612

## Product Information

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| **Primary Accession** | Q03142 |
| **Species** | Mouse |
| **Sequence** | Leu19-Asp366 |
| **Purity** | > 90% as analyzed by SDS-PAGE |
| **Endotoxin Level** | |
| **Expression System** | CHO |
| **Formulation** | Lyophilized from a 0.2 μm filtered solution in PBS. |
| **Reconstitution** | It is recommended that this vial be briefly centrifuged prior to opening to bring the contents to the bottom. Reconstitute the lyophilized powder in $ddH_2O$ or PBS up to 100 μg/ml. |
| **Storage & Stability** | Upon receiving, this product remains stable for up to 6 months at lower than -70°C. Upon reconstitution, the product should be stable for up to 1 week at 4°C or up to 3 months at -20°C. For long term storage it is recommended that a carrier protein (example 0.1% BSA) be added. Avoid repeated freeze-thaw cycles. |

## Additional Information

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| **Gene ID** | 14186 |
| **Other Names** | Fibroblast growth factor receptor 4, FGFR-4, 2.7.10.1, Protein-tyrosine kinase receptor MPK-11, CD334, Fgfr4, Fgfr-4, Mpk-11 |
| **Target Background** | Fibroblast growth factor receptor 4(FGFR4) also known as CD334 (cluster of differentiation 334) is a member of the fibroblast growth factor receptor 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. |

## Protein Information

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| **Name** | Fgfr4 |

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| **Synonyms** | Fgfr-4, Mpk-11 |
| **Function** | Tyrosine-protein kinase that acts as a cell-surface receptor for fibroblast growth factors and plays a role in the regulation of cell proliferation, differentiation and migration, and in regulation of lipid metabolism, bile acid biosynthesis, glucose uptake, vitamin D metabolism and phosphate homeostasis. Required for normal down- regulation of the expression of CYP7A1, the rate-limiting enzyme in bile acid synthesis, in response to FGF19. Phosphorylates PLCG1 and FRS2. Ligand binding leads to the activation of several signaling cascades. Activation of PLCG1 leads to the production of the cellular signaling molecules diacylglycerol and inositol 1,4,5-trisphosphate. Phosphorylation of FRS2 triggers recruitment of GRB2, GAB1, PIK3R1 and SOS1, and mediates activation of RAS, MAPK1/ERK2, MAPK3/ERK1 and the MAP kinase signaling pathway, as well as of the AKT1 signaling pathway. Promotes SRC-dependent phosphorylation of the matrix protease MMP14 and its lysosomal degradation. FGFR4 signaling is down-regulated by receptor internalization and degradation; MMP14 promotes internalization and degradation of FGFR4. Plays a role in postnatal lung development. May be involved in the development of skeletal muscle cell lineages. |
| **Cellular Location** | Cell membrane; Single-pass type I membrane protein Endosome. Endoplasmic reticulum Note=Internalized from the cell membrane to recycling endosomes, and from there back to the cell membrane. |
| **Tissue Location** | Isoform 1 and isoform 2 are expressed in lung and proliferating myoblasts and myotubes of primary myogenic cells (at protein level). Isoform 1 and isoform 2 are expressed in liver, muscle, spleen, heart, lung, kidney and in primary myogenic cells |

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