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FGF-R2β

Catalog # PVGS1607

Product Information

Primary Accession	P21803
Species	Mouse
Sequence	Arg22-Glu378
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

Gene ID	14183
Other Names	Fibroblast growth factor receptor 2, FGFR-2, 2.7.10.1, Keratinocyte growth factor receptor, KGFR, CD332, Fgfr2, Bek, Ect1
Target Background	Fibroblast growth factor receptor 2 (FGFR2) also known as CD332 is a receptor for fibroblast growth factor and it has important roles in embryonic development and tissue repair, especially bone and blood vessels. FGFR2 has two naturally occurring isoforms, FGFR2IIIb and FGFR2IIIc, created by splicing of the third immunoglobulin-like domain. FGFR2IIIb is predominantly found in ectoderm derived tissues and endothelial organ lining. Like the other members of the fibroblast growth factor receptor family, these receptors signal by binding to their ligand and dimerisation (pairing of receptors), which causes the tyrosine kinase domains to initiate a cascade of intracellular signals. On a molecular level these signals mediate cell division, growth and differentiation.

Protein Information

Name	Fgfr2
Synonyms	Bek, Ect1
Function	Tyrosine-protein kinase that acts as a cell-surface receptor for fibroblast growth factors and plays an essential role in the regulation of cell proliferation, differentiation, migration and apoptosis, and in the regulation of embryonic development. Required for normal embryonic patterning, trophoblast function, limb bud development, lung morphogenesis, osteogenesis and skin development. Plays an essential role in the regulation of osteoblast differentiation, proliferation and apoptosis, and is required for normal skeleton development. Promotes cell proliferation in keratinocytes and immature osteoblasts, but promotes apoptosis in differentiated osteoblasts. Phosphorylates PLCG1, FRS2 and PAK4. 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. FGFR2 signaling is down-regulated by ubiquitination, internalization and degradation. Mutations that lead to constitutive kinase activation or impair normal FGFR2 maturation, internalization and degradation lead to aberrant signaling. Over-expressed FGFR2 promotes activation of STAT1.
Cellular Location	Cell membrane; Single-pass type I membrane protein. Golgi apparatus. Cytoplasmic vesicle. Note=Detected on osteoblast plasma membrane lipid rafts After ligand binding, the activated receptor is rapidly internalized and degraded (By similarity).

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