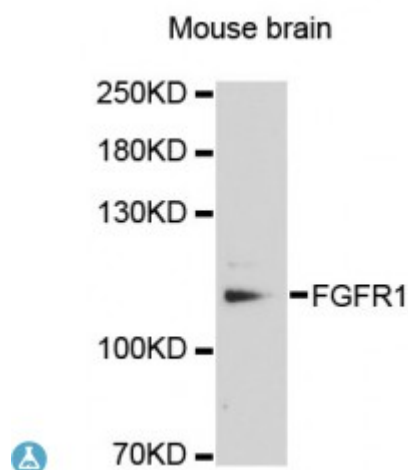


Anti-FGFR1 Antibody



Description

The protein encoded by this gene is a member of the fibroblast growth factor receptor (FGFR) family, where amino acid sequence is highly conserved between members and throughout evolution. FGFR family members differ from one another in their ligand affinities and tissue distribution. A full-length representative protein consists 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. This particular family member binds both acidic and basic fibroblast growth factors and is involved in limb induction. Mutations in this gene have been associated with Pfeiffer syndrome, Jackson-Weiss syndrome, Antley-Bixler syndrome, osteoglophonic dysplasia, and autosomal dominant Kallmann syndrome 2. Chromosomal aberrations involving this gene are associated with stem cell myeloproliferative disorder and stem cell leukemia lymphoma syndrome. Alternatively spliced variants which encode different protein isoforms have been described; however, not all variants have been fully characterized.

Model	STJ113533
Host	Rabbit
Reactivity	Mouse
Applications	WB
Immunogen	A synthetic peptide corresponding to a sequence within amino acids 300-400 of human FGFR1 (NP_075598.2).

Gene ID	2260
Gene Symbol	FGFR1
Dilution range	WB 1:200 - 1:500
Tissue Specificity	Detected in astrocytoma, neuroblastoma and adrenal cortex cell lines, Some isoforms are detected in foreskin fibroblast cell lines, however isoform 17, isoform 18 and isoform 19 are not detected in these cells
Purification	Affinity purification
Note	For Research Use Only (RUO).
Protein Name	Fibroblast growth factor receptor 1 FGFR-1
Molecular Weight	91.868 kDa
Clonality	Polyclonal
Conjugation	Unconjugated
Isotype	IgG
Formulation	PBS with 0.02% sodium azide, 50% glycerol, pH7.3.
Storage Instruction	Store at -20C. Avoid freeze / thaw cycles.
Database Links	HGNC:3688OMIM:101600Reactome:R-HSA-109704
Alternative Names	Fibroblast growth factor receptor 1 FGFR-1
Function	Tyrosine-protein kinase that acts as cell-surface receptor for fibroblast growth factors and plays an essential role in the regulation of embryonic development, cell proliferation, differentiation and migration, Required for normal mesoderm patterning and correct axial organization during embryonic development, normal skeletogenesis and normal development of the gonadotropin-releasing hormone (GnRH) neuronal system, Phosphorylates PLCG1, FRS2, GAB1 and SHB, 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 phosphorylation of SHC1, STAT1 and PTPN11/SHP2, In the nucleus, enhances RPS6KA1 and CREB1 activity and contributes to the regulation of transcription, FGFR1 signaling is down-regulated by IL17RD/SEF, and by FGFR1 ubiquitination, internalization and degradation,
Cellular Localization	Cell membrane
Post-translational Modifications	Autophosphorylated, Binding of FGF family members together with heparan sulfate proteoglycan or heparin promotes receptor dimerization and autophosphorylation on tyrosine residues, Autophosphorylation occurs in trans between the two FGFR molecules present in the dimer and proceeds in a highly ordered manner, Initial autophosphorylation at Tyr-653 increases the kinase activity by a factor of 50 to 100, After this, Tyr-583 becomes phosphorylated, followed by phosphorylation of Tyr-463, Tyr-766, Tyr-583 and Tyr-585, In a third stage, Tyr-654 is autophosphorylated, resulting in a

further tenfold increase of kinase activity, Phosphotyrosine residues provide docking sites for interacting proteins and so are crucial for FGFR1 function and its regulation,

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