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FGFR4 Antibody

Purified Mouse Monoclonal Antibody
Catalog # AO1118a

Product Information

Application	WB, IHC, E
Primary Accession	P22455
Reactivity	Human
Host	Mouse
Clonality	Monoclonal
Clone Names	4H2B10B2
Isotype	IgG1
Calculated MW	87954
Description	FGFR4 (fibroblast growth factor receptor 4) is part of a family of fibroblast growth factor receptors that mediate the biological functions of specific growth factors. There are four members of the FGF receptor family: FGFR-1 (flg), FGFR-2 (bek, KGFR), FGFR-3 and FGFR-4. Each receptor contains an extracellular ligand binding domain, a transmembrane domain and a cytoplasmic kinase domain. Following ligand binding and dimerization, the receptors are phosphorylated at specific tyrosine residues. These receptor proteins play a role in important processes such as cell division, regulating cell growth and maturation, formation of blood vessels, wound healing, and embryo development. Although specific functions of FGFR4 remain unclear, studies indicate that the gene is involved in muscle development and the maturation of bone cells in the skull. FGFR4 may also play a role in the development and maintenance of specialized cells (called foveal cones) in the light-sensitive layer (the retina) at the back of the eye.
Immunogen	Purified recombinant fragment of FGFR4 expressed in E. Coli.
Formulation	Ascitic fluid containing 0.03% sodium azide.

Additional Information

Gene ID	2264
Other Names	Fibroblast growth factor receptor 4, FGFR-4, 2.7.10.1, CD334, FGFR4, JTK2, TKF
Dilution	WB~~1/500 - 1/2000 IHC~~1/200 - 1/1000 E~~N/A
Storage	Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	FGFR4 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	FGFR4
Synonyms	JTK2, TKF
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. Mutations that lead to constitutive kinase activation or impair normal FGFR4 inactivation lead to aberrant signaling.
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	Expressed in gastrointestinal epithelial cells, pancreas, and gastric and pancreatic cancer cell lines

References

1. Cell Metab. 2005, Oct, 2(4): 209-10. 2. Mol Endocrinol. 2006, Nov, 20(11): 2965-75.

Images

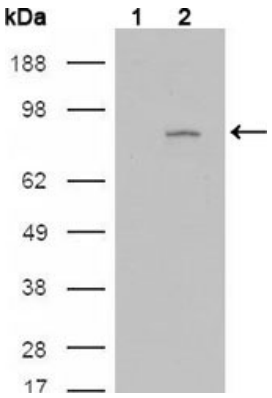
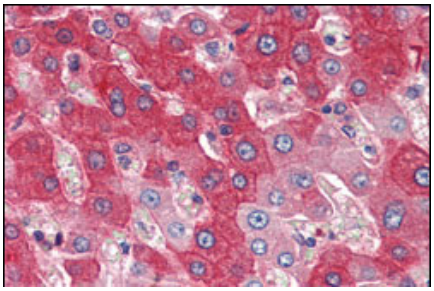


Figure 1: Western blot analysis using FGFR4 mouse mAb against HEK293T cells transfected with the pCMV6-ENTRY control (1) and pCMV6-ENTRY FGFR4 cDNA (2).

Figure 2: Immunohistochemical analysis of paraffin-embedded human liver tissues using FGFR4 mAb.



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