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FGFR4 Antibody

Purified Mouse Monoclonal Antibody
Catalog # AO1269a

Product Information

Application	WB, ICC, E
Primary Accession	P22455
Reactivity	Human
Host	Mouse
Clonality	Monoclonal
Clone Names	7H1
Isotype	IgG1
Calculated MW	87954
Description	FGFR4: fibroblast growth factor receptor 4. Entrez Protein NP_002002. It is a member of the fibroblast growth factor receptor 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 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. The genomic organization of this gene, compared to members 1-3, encompasses 18 exons rather than 19 or 20. Although alternative splicing has been observed, there is no evidence that the C-terminal half of the IgIII domain of this protein varies between three alternate forms,as indicated for members 1-3. This particular family member preferentially binds acidic fibroblastgrowth factor and, although its specific function is unknown, it is overexpressed in gynecologicaltumor samples, suggesting a role in breast and ovarian tumorigenesis.
Immunogen	Purified recombinant extracellular fragment of human FGFR4 fused with hIgGFc tag expressed in HEK293 cell line.
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 ICC~~N/A 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. Br J Cancer. 2006 Jun 19;94(12):1879-86. 2. Diabetes. 2007 Oct;56(10):2501-10.

Images

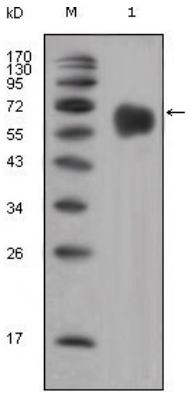

Figure 1: Western blot analysis using FGFR4 mouse mAb against extracellular domain of human FGFR4 (aa22-369).

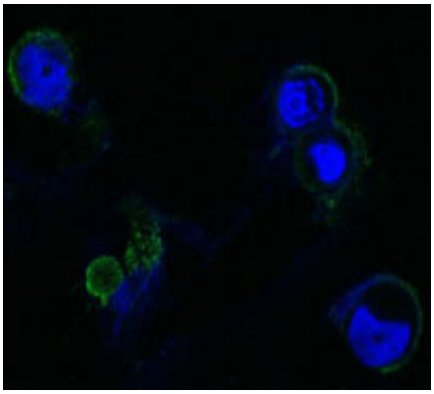

Figure 2: Confocal immunofluorescence analysis of methanol-fixed HEK293 cells trasfected with FGFR4-hIgGFc using FGFR4 mouse mAb(green), showing membrane localization. Blue: DRAQ5 fluorescent DNA dye.

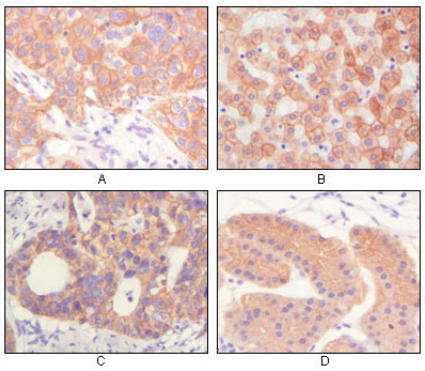

Figure 1: Immunohistochemical analysis of paraffin-embedded human lung squamous cell carcinoma (A),normal hepatocyte (B), colon adenocacinoma, normal stomach tissue (D), showing cytoplasmic and membrane localization using CK mouse mAb with DAB staining.