10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

FGFR2 Antibody (N-term)

Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AW5448

Product Information

Application	IF, IHC-P, WB
Primary Accession	P21802
Other Accession	P21803
Reactivity	Human
Predicted	Mouse
Host	Rabbit
Clonality	Polyclonal
Calculated MW	92025
Isotype	Rabbit IgG
Antigen Source	HUMAN

Additional Information

Gene ID	2263
Antigen Region	7-37
Other Names	Fibroblast growth factor receptor 2, FGFR-2, K-sam, KGFR, Keratinocyte growth factor receptor, CD332, FGFR2, BEK, KGFR, KSAM
Dilution	IF~~1:25 IHC-P~~1:100~500 WB~~1:1000
Target/Specificity	This FGFR2 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 7-37 amino acids from the N-terminal region of human FGFR2.
Format	Purified monoclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein G column, followed by dialysis against PBS.
Storage	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	FGFR2 Antibody (N-term) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	FGFR2
Synonyms	BEK, KGFR, KSAM

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 [Isoform 3]: Cell membrane; Single-pass type I membrane protein. Note=After ligand binding, the activated receptor is rapidly internalized and degraded [Isoform 13]: Secreted.

Background

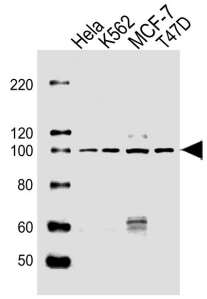
FGFR2 is a member of the fibroblast growth factor receptor family, where amino acid sequence is highly conserved between members and throughout evolution. FGFR family members differ from one another in their ligand affinities and tissue distribution. A full-length representative protein consists of an 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 is a high-affinity receptor for acidic, basic and/or keratinocyte growth factor, depending on the isoform. Mutations in the gene are associated with many craniosynostotic syndromes and bone malformations. The genomic organization of the gene encompasses 20 exons. Alternative splicing in multiple exons, including those encoding the Ig-like domains, the transmembrane region and the carboxyl terminus, results in varied isoforms which differ in structure and specificity. Isoform 1 has equal affinity for aFGF and bFGF but does not bind KGF.

References

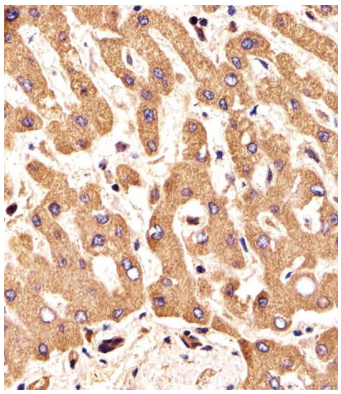
Freeman, K.W., et al., Cancer Res. 63(19):6237-6243 (2003). Goriely, A., et al., Science 301(5633):643-646 (2003). Fomenkov, A., et al., J. Biol. Chem. 278(26):23906-23914 (2003). Katoh, M., et al., Int. J. Mol. Med. 11(5):579-583 (2003). Katoh, M., et al., Int. J. Oncol. 22(5):1155-1159 (2003).

Images

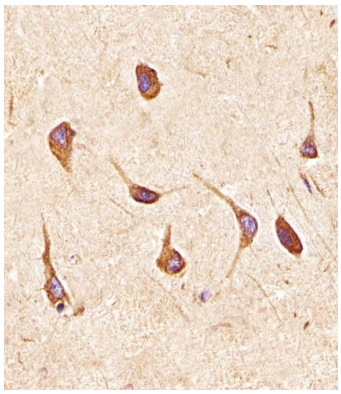
All lanes : Anti-FGFR2 Antibody (R22) at 1:1000 dilution Lane 1: Hela whole cell lysates Lane 2: K562 whole cell lysates Lane 3: MCF-7 whole cell lysates Lane 4: T47D whole cell lysates Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Rabbit IgG, (H+L),Peroxidase



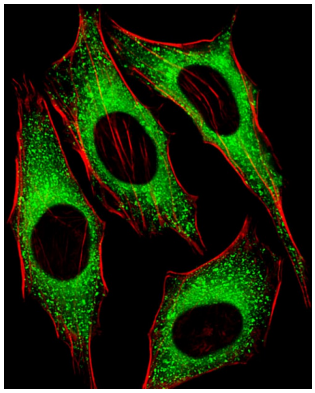
conjugated at 1/10000 dilution Predicted band size : 92 kDa Blocking/Dilution buffer: 5% NFDM/TBST.



Immunohistochemical analysis of paraffin-embedded H. liver section using FGFR2 Antibody (N-term)(Cat#AW5448). AW5448 was diluted at 1:25 dilution. A undiluted biotinylated goat polyvalent antibody was used as the secondary, followed by DAB staining.



Immunohistochemical analysis of paraffin-embedded H. brain section using FGFR2 Antibody (N-term)(Cat#AW5448). AW5448 was diluted at 1:25 dilution. A undiluted biotinylated goat polyvalent antibody was used as the secondary, followed by DAB staining.



Fluorescent image of Hela cells stained with FGFR2 Antibody (N-term)(Cat#AW5448). AW5448 was diluted at 1:25 dilution. An Alexa Fluor 488-conjugated goat anti-rabbit lgG at 1:400 dilution was used as the secondary antibody (green). Cytoplasmic actin was counterstained with Alexa Fluor® 555 conjugated with Phalloidin (red).

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.