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FGF1 Antibody (N-term)

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP6379a

Product Information

Application	WB, IHC-P, IF, E
Primary Accession	P05230
Other Accession	P20002
Reactivity	Human, Rat, Mouse
Predicted	Pig, Bovine, Canine, Rabbit, Chicken
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB14519
Calculated MW	17460
Antigen Region	5-30

Additional Information

Gene ID	2246
Other Names	Fibroblast growth factor 1, FGF-1, Acidic fibroblast growth factor, aFGF, Endothelial cell growth factor, ECGF, Heparin-binding growth factor 1, HBGF-1, FGF1, FGFA
Target/Specificity	This FGF1 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 5-30 amino acids from the N-terminal region of human FGF1.
Dilution	WB~~1:1000 IHC-P~~1:100~500 IF~~1:10~50 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is prepared by Saturated Ammonium Sulfate (SAS) precipitation 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	FGF1 Antibody (N-term) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	FGF1

Synonyms	FGFA
Function	Plays an important role in the regulation of cell survival, cell division, angiogenesis, cell differentiation and cell migration. Functions as a potent mitogen in vitro. Acts as a ligand for FGFR1 and integrins. Binds to FGFR1 in the presence of heparin leading to FGFR1 dimerization and activation via sequential autophosphorylation on tyrosine residues which act as docking sites for interacting proteins, leading to the activation of several signaling cascades. Binds to integrin ITGAV:ITGB3. Its binding to integrin, subsequent ternary complex formation with integrin and FGFR1, and the recruitment of PTPN11 to the complex are essential for FGF1 signaling. Induces the phosphorylation and activation of FGFR1, FRS2, MAPK3/ERK1, MAPK1/ERK2 and AKT1 (PubMed:18441324, PubMed:20422052). Can induce angiogenesis (PubMed:23469107).
Cellular Location	Secreted. Cytoplasm. Cytoplasm, cell cortex. Cytoplasm, cytosol. Nucleus. Note=Lacks a cleavable signal sequence Within the cytoplasm, it is transported to the cell membrane and then secreted by a non-classical pathway that requires Cu(2+) ions and S100A13. Secreted in a complex with SYT1 (By similarity). Binding of exogenous FGF1 to FGFR facilitates endocytosis followed by translocation of FGF1 across endosomal membrane into the cytosol Nuclear import from the cytosol requires the classical nuclear import machinery, involving proteins KPNA1 and KPNB1, as well as LRRC59
Tissue Location	Predominantly expressed in kidney and brain. Detected at much lower levels in heart and skeletal muscle

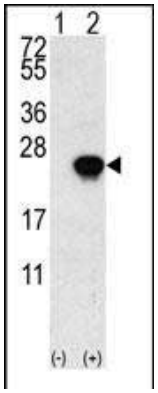
Background

FGF1 is a member of the fibroblast growth factor (FGF) family. FGF family members possess broad mitogenic and cell survival activities, and are involved in a variety of biological processes, including embryonic development, cell growth, morphogenesis, tissue repair, tumor growth and invasion. This protein functions as a modifier of endothelial cell migration and proliferation, as well as an angiogenic factor. It acts as a mitogen for a variety of mesoderm- and neuroectoderm-derived cells in vitro, thus is thought to be involved in organogenesis.

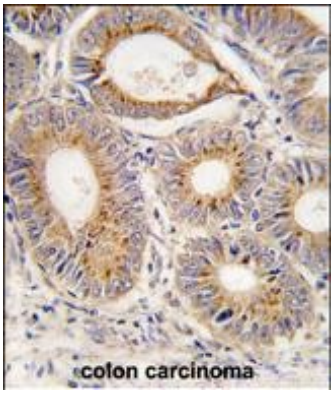
References

Fukushima,S., Int. J. Oncol. 32 (2), 467-473 (2008)
Riley,B.M.Am. J. Med. Genet. A 143 (24), 3228-3234 (2007)
Tomaszewski,M.,Circulation 116 (17), 1915-1924 (2007)

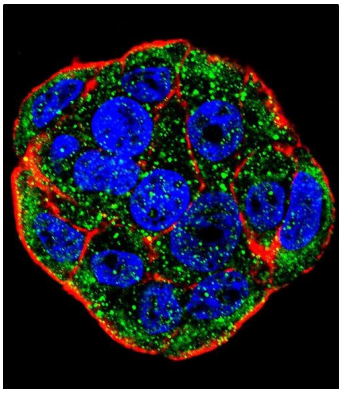
Images



Western blot analysis of FGF1 (arrow) using rabbit polyclonal FGF1 Antibody (N-term) (Cat.#AP6379a). 293 cell lysates (2 ug/lane) either nontransfected (Lane 1) or transiently transfected with the FGF1 gene (Lane 2) (Origene Technologies).



Formalin-fixed and paraffin-embedded human colon carcinoma tissue reacted with FGF1 antibody (N-term) (Cat.#AP6379a), which was peroxidase-conjugated to the secondary antibody, followed by DAB staining. This data demonstrates the use of this antibody for immunohistochemistry; clinical relevance has not been evaluated.



Confocal immunofluorescent analysis of FGF1 Antibody (N-term)(Cat#AP6379a) with WiDr cell followed by Alexa Fluor 488-conjugated goat anti-rabbit lgG (green). Actin filaments have been labeled with Alexa Fluor 555 phalloidin (red).DAPI was used to stain the cell nuclear (blue).

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