abcam

ab824

Anti-FGFR1 antibody [M5G10]

Key facts

Isotype	IgG1
Host species	Mouse
Storage buffer	pH: 7.4 Preservative: 0.02% Sodium azide Constituents: PBS
Form	Liquid
Clonality	Monoclonal
Immunogen	Recombinant Fragment Protein within Human FGFR1. The exact immunogen used to generate this antibody is proprietary information. Database link P11362
Clone number	M5G10
Purification technique	Affinity purification Protein G
Specificity	Reacts with both alpha and beta isoforms.
Epitope	Epitope is within the sequence His 241 and Val 267 between Ig loops II and III. Epitope is masked in undenatured FGFr1a.
Concentration	0.8 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →
Purification notes	Purified from TCS

Reactivity data

Flow Cyt

Tested

Species	Human

Dilution info	1 µg for 10^6 Cells
Notes	ab170190 - Mouse monoclonal IgG1, is suitable for use as an isotype control with this antibody.

IHC-P

Tested

Species	Human
Dilution info	-
Notes	-

ICC/IF

Tested

Species	Human
Dilution info	5 µg/mL
Notes	-

Target data

See full target information FGFR1

Function

Tyrosine-protein kinase that acts as a 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.

Storage

Shipped at conditions	Blue Ice
Appropriate short-term storage duration	1-2 weeks
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	-20°C
Aliquoting information	Upon delivery aliquot
Storage information	Avoid freeze / thaw cycle

Notes

This product was changed from ascites to tissue culture supernatant on 19/12/2018. Please note that the dilutions may need to be adjusted accordingly. If you have any questions please do not hesitate to contact our scientific support team.

Supplementary info

This supplementary information is collated from multiple sources and compiled automatically.

Activity summary	FGFR1 also known as fibroblast growth factor receptor 1 is a protein with a molecular weight of approximately 92 kDa. It is a receptor tyrosine kinase that binds to fibroblast growth factors (FGFs) triggering a cascade of downstream signaling pathways. FGFR1 is widely expressed in various tissues including the brain skeletal muscle and the cardiovascular system. The FGFR1 protein plays an essential role in cellular processes such as proliferation differentiation and survival.
Biological function summary	FGFR1 is significant in embryonic development and tissue repair. It does not function alone; rather it forms a complex with fibroblast growth factors and heparan sulfate proteoglycans facilitating receptor dimerization and autophosphorylation. FGFR1 is involved in bone growth angiogenesis and wound healing processes. The interaction of FGFR1 with these complex factors ensures the precise regulation of these critical physiological events in the body.
Pathways	FGFR1 participates actively in the MAPK/ERK and PI3K/AKT signaling pathways. These pathways are vital for transmitting signals from the cell surface to the DNA in the cell nucleus regulating gene expression and affecting cell cycle progression. FGFR1 works alongside similar proteins like FGFR2 influencing cell fate decisions. By modulating these pathways FGFR1 ensures a proper response to environmental signals which maintains homeostasis and adapts to physiological needs.
Associated diseases and disorders	FGFR1 is implicated in conditions such as cancer and skeletal dysplasias. Abnormal FGFR1 signaling due to mutations or overexpression can lead to tumorigenesis

contributing to the development of cancers like breast and lung cancer. The protein FGFR2 is often evaluated in parallel for similar oncogenic activities. Moreover FGFR1-related dysregulation in bone development can result in skeletal disorders highlighting its importance in both normal physiology and pathological conditions. Anti-FGFR therapies and FGFR1 ELISA tools are being explored to better understand and tackle these diseases.

Product promise

Tested

We have tested this species and application combination and it works. It is covered by our product promise.

Expected

We have not tested this specific species and application combination in-house, but expect it will work. It is covered by our product promise.

Predicted

This species and application combination has not been tested, but we predict it will work based on strong homology. However, this combination is not covered by our product promise.

Not recommended

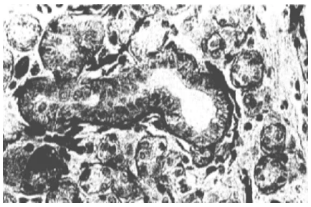
We do not recommend this combination. It is not covered by our product promise.

We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

In the unlikely event of one of our products not working as expected, you are covered by our product promise.

Full details and terms and conditions can be found here:
Terms & Conditions.

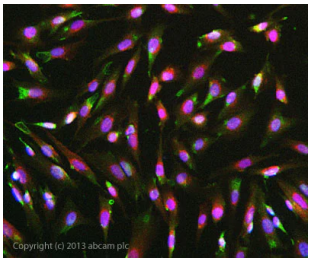
3 product images



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-FGFR1 antibody [M5G10] (ab824)

FGFR1 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using mouse Anti-FGFR1 antibody

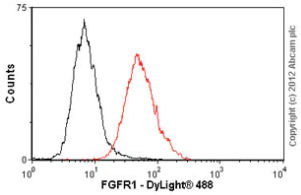
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of human normal salivary gland labelling FGFR1 with ab824 at 10µg/ml.
This image was generated using the ascites version of the product.



Immunocytochemistry/ Immunofluorescence - Anti-FGFR1 antibody [M5G10] (ab824)

FGFR1 Immunocytochemistry/ Immunofluorescence staining using mouse Anti-FGFR1 antibody

ICC/IF image of ab824 stained SKNSH cells. The cells were 4% formaldehyde fixed (10 min) and then incubated in 1%BSA / 10% normal goat serum / 0.3M glycine in 0.1% PBS-Tween for 1h to permeabilise the cells and block non-specific protein-protein interactions. The cells were then incubated with the antibody ab824 at 5µg/ml overnight at +4°C. The secondary antibody (green) was DyLight® 488 goat anti- mouse (ab96879) IgG (H+L) used at a 1/250 dilution for 1h. Alexa Fluor® 594 WGA was used to label plasma membranes (red) at a 1/200 dilution for 1h. DAPI was used to stain the cell nuclei (blue) at a concentration of 1.43µM.
This image was generated using the ascites version of the product.



Flow Cytometry - Anti-FGFR1 antibody [M5G10] (ab824)

FGFR1 Flow Cytometry staining using mouse Anti-FGFR1 antibody

Overlay histogram showing MCF7 cells stained with ab824 (red line). The cells were fixed with 80% methanol (5 min) and incubated in 1x PBS / 10% normal goat serum / 0.3M glycine to block non-specific protein-protein interactions. The cells were then incubated with the antibody (ab824, 1µg/1x106 cells) for 30 min at 22°C. The secondary antibody used was DyLight® 488 goat anti-mouse IgG (H+L) (ab96879) at 1/500 dilution for 30 min at 22°C. Isotype control antibody (black line) was mouse IgG1 [ICIGG1] (ab91353, 2µg/1x106 cells) used under the same conditions. Acquisition of >5,000 events was performed.

Please note that Abcam do not have any data for use of this antibody on non-fixed cells. We welcome any customer feedback.
This image was generated using the ascites version of the product.

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