abcam

ab309606

Alexa Fluor® 488 Anti-FGFR2 antibody [EPR24075-418]

Recombinant | RabMAb

Key facts

Isotype	IgG
Host species	Rabbit
Conjugation	Alexa Fluor® 488
Excitation/Emission	Ex: 495nm, Em: 519nm
Storage buffer	pH: 7.4 Preservative: 0.02% Sodium azide Constituents: PBS, 30% Glycerol (glycerin, glycerine), 1% BSA
Form	Liquid
Clonality	Monoclonal
Immunogen	The exact immunogen used to generate this antibody is proprietary information.
Clone number	EPR24075-418
Purification technique	Affinity purification Protein A
Concentration	0.5 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

IHC-P

Tested

Species	Human
Dilution info	1/100
Notes	-

ICC/IF

Tested

Species	Human
Dilution info	1/50
Notes	-

Flow Cyt

Expected

Species	Human
Dilution info	Use at an assay dependent concentration.
Notes	-

Target data

See full target information FGFR2

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.

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, Store in the dark

Notes

Patented technology
Our RabMAb® technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to RabMAb® patents.

What are the advantages of a recombinant monoclonal antibody?
This product is a recombinant monoclonal antibody, which offers several advantages including:

- High batch-to-batch consistency and reproducibility
- Improved sensitivity and specificity
- Long-term security of supply
- Animal-free batch production

For more information, read more on recombinant antibodies.

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Supplementary info

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

Activity summary	The fibroblast growth factor receptor 2 (FGFR2) also known as CD332 is a protein that functions as a transmembrane receptor tyrosine kinase. FGFR2 is important in signal transduction where it binds to fibroblast growth factors triggering downstream intracellular pathways. FGFR2 has two main isoforms FGFR2b and FGFR2c created through alternative splicing. The molecular weight of FGFR2 varies by isoform typically around 100-110 kDa. It gets expressed in various tissues including epithelial and mesenchymal tissues.
Biological function summary	FGFR2 plays a role in diverse cellular processes like proliferation differentiation and migration. As part of a receptor-ligand complex FGFR2 partners with fibroblast growth factors to initiate signaling cascades. It contributes to embryonic development tissue repair and angiogenesis. FGFR2b expression predominantly appears in epithelial cells while FGFR2c is found in mesenchymal cells reflecting its distinct role in tissue-specific signaling.
Pathways	FGFR2 integrates into key signaling networks especially the MAPK and PI3K/AKT pathways. It interacts with proteins like FRS2 and GRB2 which facilitate the activation of downstream signals promoting cell survival and growth. FGFR2's engagement in these pathways is critical for maintaining normal cellular functions and contributes to its involvement in regulating complex cellular responses.
Associated diseases and disorders	FGFR2 mutations have connections with certain cancers and craniosynostosis syndromes. Alterations in FGFR2 signaling pathways can lead to aberrant cellular growth and have been found in various cancers including breast and gastric cancer. In craniosynostosis syndromes mutations in FGFR2 affect bone development linking it with disorders like Apert syndrome. These conditions demonstrate the pivotal role of FGFR2 in maintaining cellular homeostasis and the consequences of its dysfunction.

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

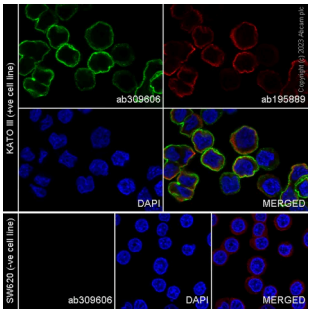
We do not recommend this combination. It is not covered by our product promise.

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.

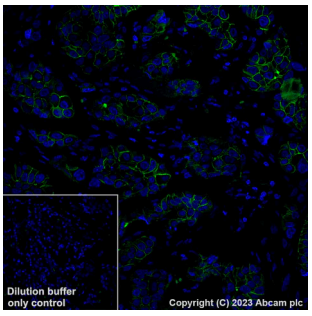
Full details and terms and conditions can be found here:
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2 product images



Immunocytochemistry/ Immunofluorescence - Alexa Fluor® 488 Anti-FGFR2 antibody [EPR24075-418] (ab309606)

Immunofluorescent analysis of 4% Paraformaldehyde-fixed, 0.1% TritonX-100 permeabilized KATO III (human stomach spherical) cells labelling FGFR2 with ab309606 at 1/50 (10.0 ug/ml) dilution (Green). Confocal image showing membranous staining in the KATO III cells.Negative control: SW620 (PMID: 24968263)Image was taken with a confocal microscope (Leica-Microsystems, TCS SP8). ab195889 Anti-alpha Tubulin mouse monoclonal antibody - Microtubule Marker (Alexa Fluor® 594) was used to counterstain tubulin at 1/200 2.5ug/ml dilution (Red). The Nuclear counterstain was DAPI (Blue).



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Alexa Fluor® 488 Anti-FGFR2 antibody [EPR24075-418] (ab309606)

Immunohistochemical analysis of paraffin-embedded Human breast cancer tissue labelling FGFR2 with ab309606 at 1/100 (5.0 ug/ml). Membraneous staining on human breast cancer. The section was incubated with ab309606 for 60 mins at room temperature (shown in green). Nuclear DNA was labelled with DAPI (shown in blue). The section was then mounted using Fluoromount®. The immunostaining was performed on a Leica Biosystems BOND RX instrument. The image was taken with a confocal microscope (Leica-Microsystems, TCS SP8). Heat mediated antigen retrieval was performed with Tris-EDTA buffer (pH 9.0, Epitope Retrieval Solution2) for 40 mins.

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