abcam

ab215385

Anti-FGFR3 (phospho Y724) antibody [EPR2281(3)] - Low endotoxin, Azide free

Recombinant | RabMAb

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	pH: 7.2 - 7.4 Constituents: PBS
Form	Liquid
Clonality	Monoclonal
Immunogen	The exact immunogen used to generate this antibody is proprietary information.
Carrier free	Yes
Clone number	EPR2281(3)
Purification technique	Affinity purification Protein A
Concentration	1.04 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

IP

Tested

Species	Human
Dilution info	-

Notes	-

Predicted

Species	Mouse
Dilution info	-
Notes	-

Not recommended

Species	Synthetic peptide
Dilution info	-
Notes	-

Dot

Tested

Species	Synthetic peptide
Dilution info	-
Notes	-

Expected

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

Predicted

Species	Mouse
Dilution info	-
Notes	-

WB

Expected

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

Predicted

Species	Mouse
Dilution info	-
Notes	-

Not recommended

Species	Synthetic peptide
Dilution info	-
Notes	-

ICC/IF

Tested

Species	Human
Dilution info	-
Notes	-

Predicted

Species	Mouse
Dilution info	-
Notes	-

Not recommended

Species	Synthetic peptide
Dilution info	-
Notes	-

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	-
Notes	-

Predicted

Species	Mouse
Dilution info	-
Notes	-

Not recommended

Species	Synthetic peptide
Dilution info	-
Notes	-

Target data

See full target information FGFR3 pY724

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 and apoptosis. Plays an essential role in the regulation of chondrocyte differentiation, proliferation and apoptosis, and is required for normal skeleton development. Regulates both osteogenesis and postnatal bone mineralization by osteoblasts. Promotes apoptosis in chondrocytes, but can also promote cancer cell proliferation. Required for normal development of the inner ear. Phosphorylates PLCG1, CBL 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. Plays a role in the regulation of vitamin D metabolism. Mutations that lead to constitutive kinase activation or impair normal FGFR3 maturation, internalization and degradation lead to aberrant signaling. Over-expressed or constitutively activated FGFR3 promotes activation of PTPN11/SHP2, STAT1, STAT5A and STAT5B. Secreted isoform 3 retains its capacity to bind FGF1 and FGF2 and hence may interfere with FGF signaling.

Storage

Shipped at conditions	Blue Ice
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	+4°C
Storage information	Do Not Freeze

Notes

ab215385 is the carrier-free version of ab155960.

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.

Species reactivity
Rat: We have preliminary internal testing data to indicate this antibody may not react with this species.
Please contact us for more information.

Conjugation ready
Our carrier-free antibodies are typically supplied in a PBS-only formulation, purified and free of BSA, sodium azide and glycerol. This conjugation-ready format is designed for use with fluorochromes, metal isotopes, oligonucleotides, and enzymes, which makes them ideal for antibody labelling, functional and cell-based assays, flow-based assays (e.g. mass cytometry) and Multiplex Imaging applications.

Use our conjugation kits for antibody conjugates that are ready-to-use in as little as 20 minutes with 1 minute hands-on-time and 100% antibody recovery: available for fluorescent dyes, HRP, biotin and gold.

What does low endotoxin mean?
Our low endotoxin, azide-free formats have low endotoxin level (1 EU/mg, determined by the TAL assay) and are free from azide, to achieve consistent experimental results in functional assays.

Supplementary info

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

Activity summary	FGFR3 or fibroblast growth factor receptor 3 is a tyrosine kinase receptor with a molecular mass of approximately 95 kDa. This receptor also known as CD333 primarily interacts with fibroblast growth factors. It resides on the cell surface and is predominately expressed in bone cartilage and the brain. FGFR3 plays a major role in cell growth regulation and differentiation affecting how cells respond to external signals.
Biological function summary	FGFR3 participates in important processes such as chondrogenesis and osteogenesis which are essential for bone growth and development. The receptor operates within a complex system involving interactions with ligand-induced dimerization and autophosphorylation. This phosphorylation event activates the receptor's intrinsic kinase activity further triggering downstream signaling pathways for cellular responses.
Pathways	FGFR3 is involved with the MAPK/ERK and PI3K/AKT pathways which play significant roles in cell proliferation differentiation and survival. FGFR3 links closely with FGF ligands and similar receptor types such as FGFR1 and FGFR2 within these pathways. Differences in pathway activation can lead to diverse biological responses illustrating its pivotal role in maintaining cellular homeostasis.
Associated diseases and disorders	FGFR3 mutations have significant links to skeletal disorders most notably achondroplasia characterized by short limbs and abnormal bone growth. FGFR3 also associates with bladder cancer where overactivity of the receptor leads to increased cell proliferation and survival. Mutations in FGFR3 often correlate with these conditions impacting signaling pathways and interacting with proteins such as PTPN11 highlighting its critical role in pathogenesis.

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

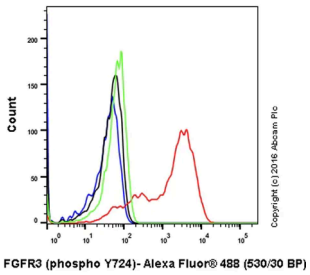
We do not recommend this combination. It is not covered by our product promise.

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.

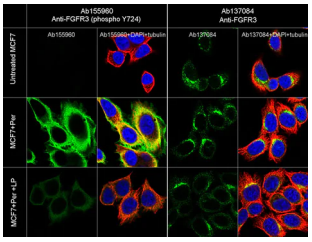
5 product images



Flow Cytometry (Intracellular) - Anti-FGFR3 (phospho Y724) antibody [EPR2281(3)] - Low endotoxin, Azide free (ab215385)

FGFR3 (phospho Y724) Flow Cytometry (Intracellular) staining using rabbit Anti-FGFR3 (phospho Y724) antibody

Intracellular Flow Cytometry analysis of MCF-7 (human breast carcinoma) treated with 1 mM pervanadate for 30 minutes cells labeling FGFR3 (phospho Y724) with purified ab155960 at 1/50 dilution (red). The secondary antibody was Goat anti rabbit IgG (Alexa Fluor® 488) at 1/2000 dilution. Green shows untreated MCF-7 (human breast carcinoma) cells. A Rabbit monoclonal IgG (Black) was used as the isotype control and cells without incubation with primary antibody and secondary antibody (Blue) were used as unlabeled control.
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab155960).



Immunocytochemistry/ Immunofluorescence - Anti-FGFR3 (phospho Y724) antibody [EPR2281(3)] - Low endotoxin, Azide free (ab215385)

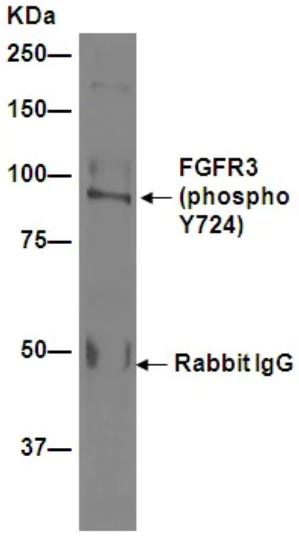
FGFR3 (phospho Y724) Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-FGFR3 (phospho Y724) antibody

Immunocytochemistry/Immunofluorescence analysis of untreated, Per treated and Per + LP treated MCF-7 cells labelling FGFR3 (phospho Y724) with ab155960 (left) and FGFR3 with ab137084 (right) both at a dilution of 1/200.
Cells were fixed with 100% methanol. ab150077, an Alexa Fluor® 488-conjugated goat anti-rabbit IgG (1/1000) was used as the secondary antibody. DAPI (blue) was used as the nuclear counterstain. ab7291, a mouse anti-tubulin (1/1000) and ab150120, an Alexa Fluor® 594-conjugated goat anti-mouse IgG (1/1000) were also used.

The image shows increased cytoplasmic staining after Pervanadate (1 mM, 30 min) treatment on MCF7 cells. The LP treatment decreased the cytoplasmic staining caused by Pervanadate.

ab137084 was used as a Pan control for ab155960. The results showed cytoplasmic staining on untreated, Per treated and Per + LP treated MCF7 cells.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab155960).



Immunoprecipitation - Anti-FGFR3 (phospho Y724) antibody [EPR2281(3)] - Low endotoxin, Azide free (ab215385)

ab155960 (unpurified) at 1/15 immunoprecipitating FGFR3 (phospho Y724) in MCF-7 cells treated with pervanadate. For western blotting, a peroxidase-conjugated goat anti-rabbit IgG (H+L) was used as the secondary antibody (1/1000).
Blocking buffer and concentration: 5% NFDM/TBST.

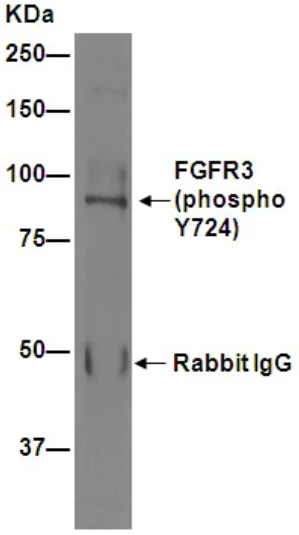
Diluting buffer and concentration: 5% NFDM /TBST.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab155960).

All lanes:
Immunoprecipitation - Anti-FGFR3 (phospho Y724) antibody [EPR2281(3)] (ab155960)

Predicted band size: 88 kDa

Observed band size: 98 kDa



Immunoprecipitation - Anti-FGFR3 (phospho Y724) antibody [EPR2281(3)] - Low endotoxin, Azide free (ab215385)

ab155960 (purified) at 1/50 immunoprecipitating FGFR3 (phospho Y724) in MCF-7 cells treated with pervanadate. For western blotting, a peroxidase-conjugated goat anti-rabbit IgG (H+L) was used as the secondary antibody (1/1000).
Blocking buffer and concentration: 5% NFDM/TBST.

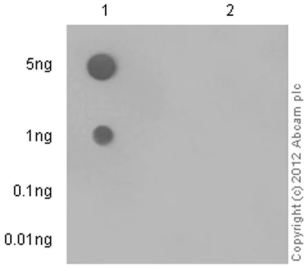
Diluting buffer and concentration: 5% NFDM /TBST.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab155960).

All lanes:
Immunoprecipitation - Anti-FGFR3 (phospho Y724) antibody [EPR2281(3)] (ab155960)

Predicted band size: 88 kDa

Observed band size: 98 kDa



Dot Blot - Anti-FGFR3 (phospho Y724) antibody [EPR2281(3)] - Low endotoxin, Azide free (ab215385)

FGFR3 (phospho Y724) Dot Blot staining using rabbit Anti-FGFR3 (phospho Y724) antibody

Dot blot analysis of FGFR3 (pY724) phospho peptide (lane 1) and FGFR3 non-phospho peptide (lane 2) labelling FGFR2 (phospho Y724) with ab155960 at a dilution of 1/1000. A peroxidase-conjugated goat anti-rabbit IgG (H+L) was used as the secondary antibody (1/2500).
Blocking and dilution buffer: 5% NFDM/TBST.

Exposure time: 10 seconds.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab155960).

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