abcam

ab155960

Anti-FGFR3 (phospho Y724) antibody [EPR2281(3)]

Anti-FGFR3 (phospho Y724) antibody [EPR2281(3)] (ab155960) is a rabbit monoclonal antibody detecting FGFR3 in **Western Blot, Flow Cytometry (Intra), IP, ICC/IF, Dot Blot**. Suitable for **Human**.

- Biophysical QC for unrivalled batch-batch consistency
- Over 10 publications

Recombinant | RabMAb | 20ul selling size

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	Preservative: 0.01% Sodium azide Constituents: PBS, 40% Glycerol (glycerin, glycerine), 0.05% BSA
Form	Liquid
Clonality	Monoclonal
Immunogen	The exact immunogen used to generate this antibody is proprietary information.
Clone number	EPR2281(3)
Purification technique	Affinity purification Protein A
Concentration	0.511 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

IP

Tested

Species	Human

Dilution info	1/15 - 1/50
Notes	-

Predicted

Species	Mouse
Dilution info	-
Notes	-

Dot

Tested

Species	Human
Dilution info	1/1000
Notes	-

Predicted

Species	Mouse
Dilution info	-
Notes	-

WB

Tested

Species	Human
Dilution info	1/1000 - 1/10000
Notes	-

Predicted

Species	Mouse
Dilution info	-
Notes	-

IHC-P

Not recommended

Species	Human, Mouse
Dilution info	-
Notes	-

ICC/IF

Tested

Species	Human
Dilution info	1/80 - 1/300
Notes	-

Predicted

Species	Mouse
Dilution info	-
Notes	-

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	1/50
Notes	-

Predicted

Species	Mouse
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	Conditional Ambient
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

What is this antibody validated in?
Anti-FGFR3 (phospho Y724) antibody [EPR2281(3)] (ab155960) is a rabbit recombinant monoclonal antibody and is validated for use in Western Blot (WB), Flow Cytometry (Intra), Immunoprecipitation (IP), Immunocytochemistry/immunofluorescence (ICC/IF), Dot Blot in Human samples.

What is the molecular weight of FGFR3?

Anti-FGFR3 (phospho Y724) [EPR2281(3)] (ab155960) specifically detects a band for FGFR3 (UniProt: P22607) at a molecular weight of 88kDa.

Trusted by the scientific community
Anti-FGFR3 (phospho Y724) [EPR2281(3)] (ab155960) was first used in a scientific publication in 2013 and has been cited over 10 times in peer-reviewed journals.

Other related products
We have a range of other formats of antibody clone [EPR2281(3)] also available for your convenience: ab155960, Carrier free - ab215385, Alexa Fluor® 488 - ab237164, Alexa Fluor® 647 - ab237165, Carrier free - ab271918, APC - ab303576

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.

Trial sizes available!
Test your antibody or perform pre-screening before committing to a larger quantity. Sold in 20µl. Discover our selection of trial-size antibodies.

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

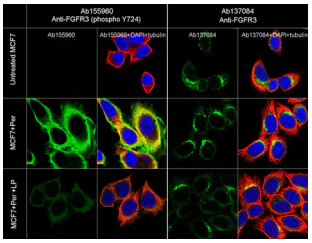
We do not recommend this combination. It is not covered by our product promise.

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.

7 product images



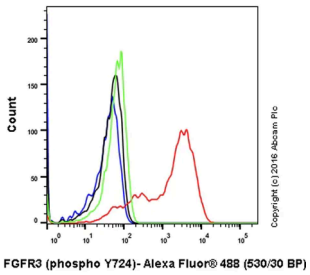
Immunocytochemistry/ Immunofluorescence - Anti-FGFR3 (phospho Y724) antibody [EPR2281(3)] (ab155960)

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

Immunocytochemistry/Immunofluorescence analysis of untreated, Per treated and Per + LP treated MCF7 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.

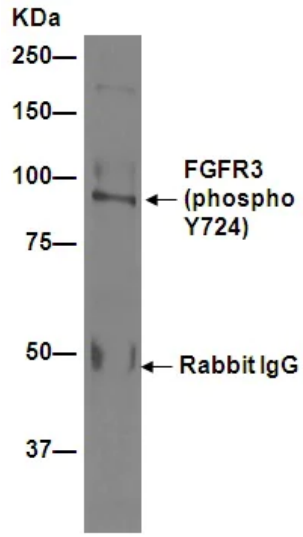
ab137084 was used as a Pan control for ab155960. The results showed cytoplasmic staining on untreated, Per treated and Per + LP treated MCF7 cells.



Flow Cytometry (Intracellular) - Anti-FGFR3 (phospho Y724) antibody [EPR2281(3)] (ab155960)

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

Intracellular Flow Cytometry analysis of MCF7 (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 MCF7 (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.



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

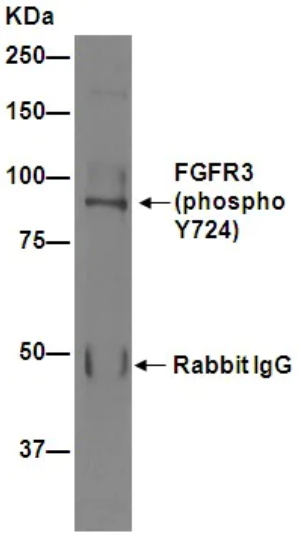
ab155960 (unpurified) at 1/15 immunoprecipitating FGFR3 (phospho Y724) in MCF7 cells treated with pervanadate. For western blotting, a peroxidase-conjugated goat anti-rabbit IgG (H+L) was used as the secondary antibody (1/1000).
Blocking buffer and concentration: 5% NFDM/TBST.

Diluting buffer and concentration: 5% NFDM /TBST.

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)] (ab155960)

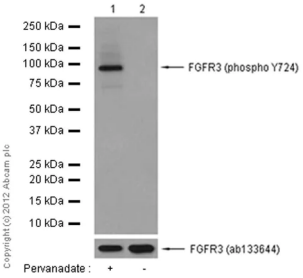
ab155960 (purified) at 1/50 immunoprecipitating FGFR3 (phospho Y724) in MCF7 cells treated with pervanadate. For western blotting, a peroxidase-conjugated goat anti-rabbit IgG (H+L) was used as the secondary antibody (1/1000).
Blocking buffer and concentration: 5% NFDM/TBST.

Diluting buffer and concentration: 5% NFDM /TBST.

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

Predicted band size: 88 kDa

Observed band size: 98 kDa



Western blot - Anti-FGFR3 (phospho Y724) antibody [EPR2281(3)] (ab155960)

FGFR3 (phospho Y724) Western blot staining using rabbit Anti-FGFR3 (phospho Y724) antibody

Blocking and dilution buffer: 5% NFDM/TBST.
All lanes:
Western blot - Anti-FGFR3 (phospho Y724) antibody [EPR2281(3)] (ab155960) at 1/10000 dilution

Lane 1:
MCF7 whole cell lysate - treated with pervanadate at 10 µg

Lane 2:
MCF7 whole cell lysate - untreated at 10 µg

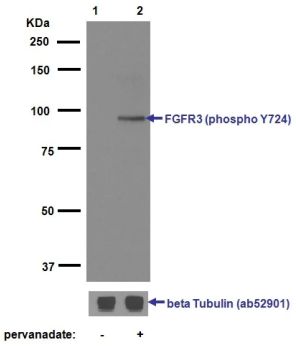
Secondary

All lanes:
Peroxidase-conjugated goat anti-rabbit IgG (H+L) at 1/1000 dilution

Predicted band size: 88 kDa

Observed band size: 98 kDa

Exposure time: 30s



Western blot - Anti-FGFR3 (phospho Y724) antibody [EPR2281(3)] (ab155960)

FGFR3 (phospho Y724) Western blot staining using rabbit Anti-FGFR3 (phospho Y724) antibody

Blocking and dilution buffer: 5% NFDM/TBST.
All lanes:
Western blot - Anti-FGFR3 (phospho Y724) antibody [EPR2281(3)] (ab155960) at 1/20000 dilution

Lane 1:
MCF7 cell lysate - untreated at 10 µg

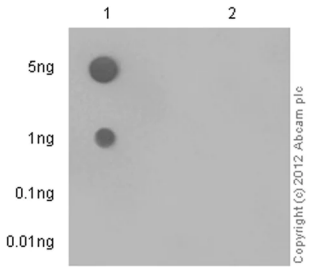
Lane 2:
MCF7 cell lysate - treated with pervanadate at 10 µg

Secondary

All lanes:
Peroxidase-conjugated goat anti-rabbit IgG (H+L) at 1/1000 dilution

Predicted band size: 88 kDa

Observed band size: 96 kDa



Dot Blot - Anti-FGFR3 (phospho Y724) antibody [EPR2281(3)] (ab155960)

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

Dot blot analysis of human FGFR3 (pY724) phospho peptide (lane 1) and human 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.

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