abcam

ab231

Anti-EGFR antibody [ICR10]

Anti-EGFR antibody [ICR10] (ab231) is a rat monoclonal antibody detecting EGFR in **Flow Cytometry, ICC/IF**. Suitable for **Human**.

- Over 30 publications
- Trusted since 1999

Lab Essentials | Recombinant | 20ul selling size

Key facts

Isotype	IgG2a
Host species	Rat
Storage buffer	pH: 7.2 - 7.4 Preservative: 0.01% Sodium azide Constituents: PBS, 40% Glycerol (glycerin, glycerine), 0.05% BSA
Form	Liquid
Clonality	Monoclonal
Immunogen	Native Full Length Protein corresponding to Human EGFR. Database link P00533
Clone number	ICR10
Purification technique	Ion exchange chromatography
Epitope	ICR10 binds to epitope B, and has an affinity of 6.7x10-9 M.
Light chain type	unknown
Concentration	1 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →
Purification notes	Purified IgG prepared by ion exchange chromatography.

Reactivity data

Flow Cyt

Tested

Species	Human
Dilution info	1/1000
Notes	ab18450 - Rat monoclonal IgG2a, is suitable for use as an isotype control with this antibody.

ICC/IF

Tested

Species	Human
Dilution info	1/50
Notes	-

WB

Not recommended

Species	Human
Dilution info	-
Notes	-

IHC-P

Not recommended

Species	Human
Dilution info	-
Notes	-

Target data

See full target information EGFR

Function	Receptor tyrosine kinase binding ligands of the EGF family and activating several signaling cascades to convert extracellular cues into appropriate cellular responses (PubMed:10805725, PubMed:27153536, PubMed:2790960, PubMed:35538033). Known ligands include EGF, TGFA/TGF-alpha, AREG, epigen/EPGN, BTC/betacellulin, epiregulin/EREG and HBEGF/heparin-binding EGF (PubMed:12297049, PubMed:15611079, PubMed:17909029, PubMed:20837704, PubMed:27153536, PubMed:2790960, PubMed:7679104, PubMed:8144591, PubMed:9419975). Ligand binding triggers receptor homo- and/or heterodimerization and autophosphorylation on key cytoplasmic residues. The phosphorylated receptor recruits adapter proteins like GRB2 which in turn activates complex downstream signaling cascades. Activates at least 4 major downstream signaling cascades including the RAS-RAF-MEK-ERK, PI3 kinase-AKT, PLCgamma-PKC and STATs modules (PubMed:27153536). May also activate the NF-kappa-B signaling cascade (PubMed:11116146). Also directly phosphorylates other proteins like RGS16, activating its GTPase activity and probably coupling the EGF receptor signaling to the G protein-coupled receptor signaling (PubMed:11602604). Also phosphorylates MUC1 and increases its interaction with SRC and CTNNB1/beta-catenin (PubMed:11483589). Positively regulates cell migration via interaction with CCDC88A/GIV which retains EGFR at the cell membrane following ligand stimulation, promoting EGFR signaling which triggers cell migration (PubMed:20462955). Plays a role in enhancing learning and memory performance (By similarity). Plays a role in mammalian pain signaling (long-lasting hypersensitivity) (By similarity). Isoform 2 may act as an antagonist of EGF action. (Microbial infection) Acts as a receptor for hepatitis C virus (HCV) in hepatocytes and facilitates its cell entry. Mediates HCV entry by promoting the formation of the CD81-CLDN1 receptor complexes that are essential for HCV entry and by enhancing membrane fusion of cells expressing HCV envelope glycoproteins.

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

What is this antibody validated in?
Anti-EGFR antibody [ICR10] (ab231) is a rat monoclonal antibody and is validated for use in Flow Cytometry (Flow Cyt), Immunocytochemistry/immunofluorescence (ICC/IF) in Human samples.

Trusted by the scientific community
Anti-EGFR [ICR10] (ab231) was first used in a scientific publication in 1999 and has been cited over 30 times in peer-reviewed journals.

Reviewed by scientists
Anti-EGFR [ICR10] (ab231) has over 5 independent reviews from customers.

Other related products
We have a range of other formats of antibody clone [ICR10] also available for your convenience: ab231, FITC - ab11400, PE - ab27764

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.

Supplementary info

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

Activity summary	EGFR or Epidermal Growth Factor Receptor is a transmembrane glycoprotein that acts as a receptor for members of the epidermal growth factor family. Known alternatively as ErbB1 or HER1 this receptor has an approximate molecular weight of 170 kDa. EGFR is expressed in various cell types notably on epithelial cells and can influence multiple cellular processes through its kinase activity. It participates in the regulation of cell growth multiplication and survival by activating its kinase domain upon ligand binding.
Biological function summary	The EGFR protein plays an important role in cellular communication and signaling processes. EGFR pairs with other receptor family members to form active dimers or even higher-order complexes which in turn initiate intracellular signaling cascades. Through these complexes EGFR influences many processes including cell differentiation and repair. This function of EGFR makes it an integral part of mammalian biology affecting how cells respond to their environment by mediating changes in gene expression.
Pathways	EGFR is a central player in the MAPK and PI3K/Akt signaling pathways. Alongside other protein partners like KRAS and PI3 kinase it contributes to transmitting signals from the cell surface to the nucleus affecting gene transcription and cell behavior. These pathways are important for normal cell growth and division and

	aberrations in these pathways can lead to excessive or insufficient cell proliferation.
Associated diseases and disorders	EGFR is pertinent to cancer biology including non-small cell lung cancer and glioblastoma where mutations or overexpression of the receptor frequently occur. It connects to proteins such as PTEN and BRAF which influence tumor progression and response to targeted therapies. EGFR's involvement in these disorders highlights its significance as a therapeutic target since it can be manipulated to alter disease progression.

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

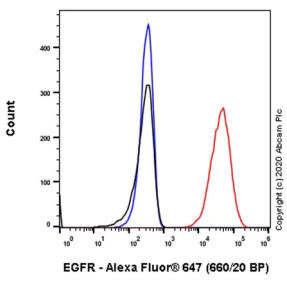
We do not recommend this combination. It is not covered by our product promise.

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.

2 product images



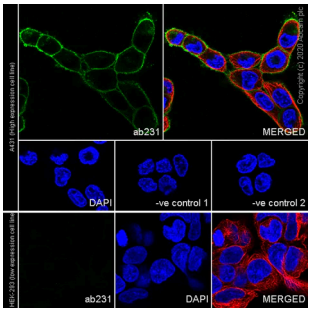
Flow Cytometry - Anti-EGFR antibody [ICR10] (ab231)

EGFR Flow Cytometry staining of A431 (Human epidermoid carcinoma epithelial cell) cells using rat Anti-EGFR antibody

Flow cytometric analysis of A431 (Human epidermoid carcinoma epithelial cell) cells labelling EGFR with ab231 at 1/1000 dilution (0.1µg) (Red) compared with a Rat monoclonal IgG / Black isotype control and an unlabelled control (cells without incubation with primary antibody and secondary antibody) / Blue.

Goat F(ab)2 Anti-Rat IgG Fc (Alexa Fluor® 647, ab150163) at 1/2000 dilution was used as the secondary antibody.

Gated on viable cells.



Immunocytochemistry/ Immunofluorescence - Anti-EGFR antibody [ICR10] (ab231)

EGFR Immunocytochemistry/ Immunofluorescence staining of A431 cells using rat Anti-EGFR antibody

Immunofluorescent analysis of 4% Paraformaldehyde-fixed, 0.1% TritonX-100 permeabilized A431 cells labelling EGFR with ab231 at 1/50 dilution followed by secondary antibody ab150117 Goat Anti-Mouse IgG H&L (Alexa Fluor® 488) preadsorbed at 1/1000 dilution (green).

ab179513 Anti-beta Tubulin rabbit monoclonal antibody was used as a counterstain at a 1/200 dilution followed by a secondary antibody ab150080 Goat Anti-Rabbit IgG H&L (Alexa Fluor® 594) used at a 1/1000 dilution (red).
Confocal image showing strong membranous and weak cytoplasmic staining in A431 cells.
Low expression control: HEK-293 (PMID: 26368334).

Nuclear DNA was labelled with DAPI (shown in blue).

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