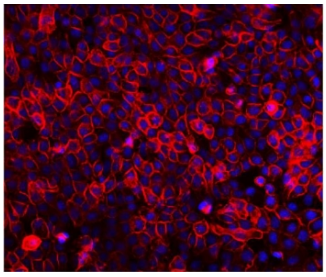
EGF Receptor Antibody for IF - EGFR Immunofluorescence Antibody (RQ5881)

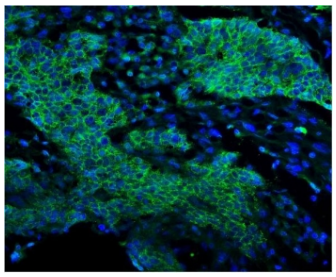
Catalog No.	Formulation	Size
RQ5881	0.5mg/ml if reconstituted with 0.2ml sterile DI water	100 ug

Bulk quote request

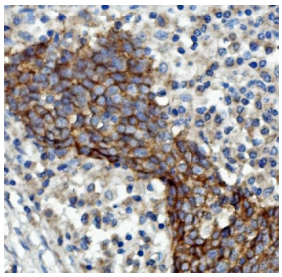
Availability	1-3 business days
Species Reactivity	Human, Mouse, Rat
Format	Antigen affinity purified
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit IgG
Purity	Affinity purified
Buffer	Lyophilized from 1X PBS with 2.5% BSA and 0.025% sodium azide
UniProt	P00533
Applications	Western Blot : 0.5-1ug/ml Immunohistochemistry : 2-5ug/ml Immunofluorescence : 5ug/ml Flow Cytometry : 1-3ug/million cells Direct ELISA : 0.1-0.5ug/ml
Limitations	This EGF Receptor Antibody for IF - EGFR Immunofluorescence Antibody is available for research use only.



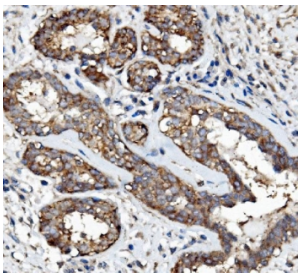
EGF Receptor Antibody for IF A431 Staining. Immunofluorescence analysis of FFPE human A431 cells stained with EGF receptor antibody detecting EGFR (red). Prominent membranous staining outlines epithelial cell borders with additional cytoplasmic signal, consistent with EGFR localization as a receptor tyrosine kinase and its trafficking following activation. The staining highlights dense epithelial cell populations typical of A431 cells, which are known to express high levels of EGFR. DAPI nuclear stain (blue) highlights nuclei. HIER: steam section in pH 6 citrate buffer for 20 min.



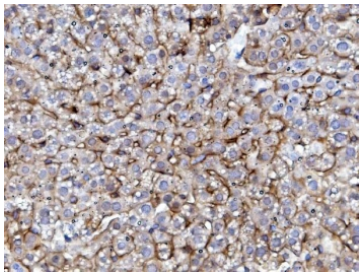
EGF Receptor Antibody for IF Lung Cancer Staining. Immunofluorescence analysis of FFPE human lung cancer tissue stained with EGF receptor antibody detecting EGFR (green). Tumor epithelial cells show strong membranous staining outlining cell borders with additional cytoplasmic signal, consistent with EGFR localization as a receptor tyrosine kinase and its trafficking following activation. The staining highlights malignant epithelial structures within the tumor microenvironment, while surrounding stromal areas show comparatively lower signal. DAPI nuclear stain (blue) highlights nuclei. HIER: boil tissue sections in pH 8 EDTA for 20 min and allow to cool before testing.



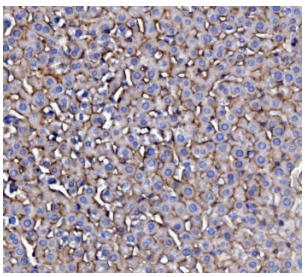
IHC staining of FFPE human lung cancer with EGF Receptor antibody. HIER: boil tissue sections in pH8 EDTA for 20 min and allow to cool before testing.



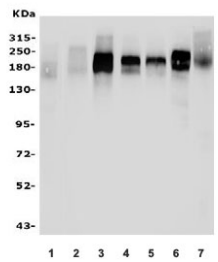
EGF Receptor Antibody Breast Cancer IHC. Immunohistochemistry staining of FFPE human breast cancer with EGF Receptor antibody. HIER: boil tissue sections in pH8 EDTA for 20 min and allow to cool before testing.



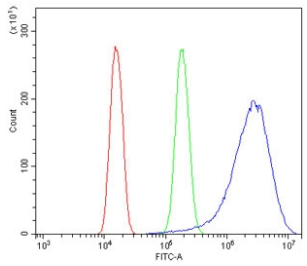
EGF Receptor Antibody Mouse Liver IHC. Immunohistochemistry staining of FFPE mouse liver with EGF Receptor antibody. HIER: boil tissue sections in pH8 EDTA for 20 min and allow to cool before testing.



EGF Receptor Antibody Rat Liver IHC. Immunohistochemistry staining of FFPE rat liver with EGF Receptor antibody. HIER: boil tissue sections in pH8 EDTA for 20 min and allow to cool before testing.



EGF Receptor Antibody WB. Western blot testing of human 1) placenta, 2) U-87 MG, 3) A431, 4) A549, 5) HeLa, 6) rat liver and 7) mouse liver lysate with EGF Receptor antibody. Expected molecular weight: 134-180 kDa depending on glycosylation level.



EGF Receptor Antibody FACS. Flow cytometry testing of human A431 cells with EGF Receptor antibody at 1ug/million cells (blocked with goat sera); Red=cells alone, Green=isotype control, Blue= EGF Receptor antibody.

Description

Epidermal growth factor receptor (EGFR), also known as ERBB1 or HER1, is a transmembrane receptor tyrosine kinase that plays a central role in regulating cell proliferation, survival, differentiation, and migration. EGF Receptor Antibody for IF is used to detect EGFR in immunofluorescence applications, enabling high-resolution visualization of receptor localization, trafficking, and signaling dynamics within cells. This application is particularly valuable for studying the spatial distribution of EGFR and its movement between cellular compartments during activation.

EGFR is activated through binding of ligands such as epidermal growth factor and transforming growth factor alpha, which induces receptor dimerization and autophosphorylation of intracellular tyrosine residues. This activation triggers downstream signaling cascades including MAPK, PI3K-AKT, and JAK-STAT pathways, which coordinate cellular responses such as growth, migration, and survival. In immunofluorescence experiments, EGFR is commonly observed at the plasma membrane under basal conditions, reflecting its role as a cell surface signaling receptor.

Upon ligand stimulation, EGFR undergoes rapid internalization through clathrin-mediated endocytosis, followed by trafficking through early endosomes and either recycling back to the membrane or targeting for degradation. This process results in a characteristic shift from strong membranous staining to punctate cytoplasmic localization, which can be clearly visualized using immunofluorescence techniques. These trafficking dynamics make EGFR a widely studied model for receptor internalization and signal attenuation.

EGFR is predominantly expressed in epithelial cells, where it localizes to the plasma membrane and contributes to tissue homeostasis and controlled proliferation. In cancer, EGFR expression is frequently increased or dysregulated, leading to sustained signaling that promotes tumor growth, invasion, and resistance to apoptosis. Immunofluorescence detection of EGFR in cancer cell lines and tissues allows detailed analysis of receptor distribution, internalization patterns, and altered signaling states associated with oncogenic transformation.

Subcellular localization of EGFR in immunofluorescence studies may include membrane-associated staining, cytoplasmic vesicular structures, and occasional perinuclear accumulation depending on activation state and cellular context. This variability provides important insight into receptor trafficking and functional status. Visualization of EGFR alongside cytoskeletal or organelle markers can further define its role in coordinating signaling with cellular architecture.

The use of an EGF Receptor Antibody for IF provides a powerful tool for investigating receptor dynamics at the cellular level. Detection of EGFR in distinct subcellular compartments supports studies of signal transduction, endocytosis, and receptor recycling, making it highly relevant for research in cell biology, cancer progression, and targeted therapeutic mechanisms.

Explore our EGFR Antibody (31G7) page for a broader view of EGFR expression and extensively validated antibody performance across applications.

Application Notes

Optimal dilution of the EGF Receptor antibody should be determined by the researcher.

Immunogen

Recombinant human protein (amino acids N36-N497) was used as the immunogen for the EGF Receptor antibody.

Storage

After reconstitution, the EGF Receptor Antibody for IF - EGFR Immunofluorescence Antibody can be stored for up to one month at 4oC. For long-term, aliquot and store at -20oC. Avoid repeated freezing and thawing.

Alternate Names

EGF receptor antibody, EGFR antibody, Epidermal growth factor receptor antibody, ERBB1 antibody, HER1 antibody, EGFR IF antibody

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