

EGFR Antibody
Rabbit Polyclonal Antibody
Catalog # ABV10602

Specification

EGFR Antibody - Product Information

Application	WB, IP
Primary Accession	P00533
Reactivity	Human, Mouse
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Calculated MW	134277

EGFR Antibody - Additional Information

Gene ID 1956

Application & Usage

Western blotting (1:500 - 1:2500) and Immunoprecipitation. However, the optimal concentrations should be determined individually. The antibody recognizes the EGFR of human and mouse origins. Reactivity to other species has not been tested.

Other Names

EGFR, Epidermal Growth Factor Receptor, ERBB, ERBB1, ERBB-1, Erythroblastic Leukemia viral (v-erb-b) oncogene homolog

Target/Specificity

EGFR

Antibody Form

Liquid

Appearance

Colorless liquid

Formulation

100 µl affinity purified rabbit polyclonal antibody in phosphate-buffered saline (PBS) containing 30% glycerol, 0.5% BSA and 0.01% thimerosal.

Handling

The antibody solution should be gently mixed before use.

Reconstitution & Storage

-20 °C

Background Descriptions

Precautions

EGFR Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

EGFR Antibody - Protein Information

Name EGFR ([HGNC:3236](#))

Synonyms ERBB, ERBB1, HER1

Function

Receptor tyrosine kinase binding ligands of the EGF family and activating several signaling cascades to convert extracellular cues into appropriate cellular responses (PubMed:[2790960](http://www.uniprot.org/citations/2790960), PubMed:[10805725](http://www.uniprot.org/citations/10805725), PubMed:[27153536](http://www.uniprot.org/citations/27153536)). Known ligands include EGF, TGFA/TGF-alpha, AREG, epigen/EPGN, BTC/betacellulin, epiregulin/EREG and HBEGF/heparin-binding EGF (PubMed:[2790960](http://www.uniprot.org/citations/2790960), PubMed:[7679104](http://www.uniprot.org/citations/7679104), PubMed:[8144591](http://www.uniprot.org/citations/8144591), PubMed:[9419975](http://www.uniprot.org/citations/9419975), PubMed:[15611079](http://www.uniprot.org/citations/15611079), PubMed:[12297049](http://www.uniprot.org/citations/12297049), PubMed:[27153536](http://www.uniprot.org/citations/27153536), PubMed:[20837704](http://www.uniprot.org/citations/20837704), PubMed:[17909029](http://www.uniprot.org/citations/17909029)). 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](http://www.uniprot.org/citations/27153536)). May also activate the NF-kappa-B signaling cascade (PubMed:[11116146](http://www.uniprot.org/citations/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](http://www.uniprot.org/citations/11602604)). Also phosphorylates MUC1 and increases its interaction with SRC and CTNNB1/beta-catenin (PubMed:[11483589](http://www.uniprot.org/citations/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](http://www.uniprot.org/citations/20462955)). Plays a role in enhancing learning and memory performance (By similarity). Plays a role in mammalian pain signaling (long-lasting hypersensitivity) (By similarity).

Cellular Location

Cell membrane; Single-pass type I membrane protein. Endoplasmic reticulum membrane; Single-pass type I membrane protein. Golgi apparatus membrane; Single-pass type I membrane protein. Nucleus membrane; Single-pass type I membrane protein Endosome Endosome membrane. Nucleus. Note=In response to EGF, translocated from the cell membrane to the nucleus via Golgi and ER (PubMed:20674546, PubMed:17909029). Endocytosed upon activation by ligand (PubMed:2790960, PubMed:17182860, PubMed:27153536, PubMed:17909029). Colocalized with GPER1 in the nucleus of estrogen agonist-induced cancer-associated fibroblasts (CAF) (PubMed:20551055)

Tissue Location

Ubiquitously expressed. Isoform 2 is also expressed in ovarian cancers.

EGFR Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

EGFR Antibody - Images

EGFR Antibody - Background

The EGF receptor family comprises several related receptor tyrosine kinases that are frequently overexpressed in a variety of carcinomas. Members of this receptor family include EGFR (HER1), Neu (ErbB-2, HER2), ErbB-3 (HER3) and ErbB-4 (HER4), which form either homodimers or heterodimers upon ligand binding. Exons in the EGFR gene product are frequently either deleted or duplicated to produce deletion mutants (DM) or tandem duplication mutants (TDM), respectively, which are detected at various molecular weights. EGFR binds several ligands, including epidermal growth factor (EGF), transforming growth factor α (TGF α), Amphiregulin and heparin binding-EGF (HB-EGF). Ligand binding promotes the internalization of EGFR via Clathrin-coated pits and its subsequent degradation in response to its intrinsic tyrosine kinase. EGFR is involved in organ morphogenesis and maintenance and repair of tissues, but upregulation of EGFR is associated with tumor progression. The oncogenic effects of EGFR include initiation of DNA synthesis, enhanced cell growth, invasion and metastasis. Abrogation of EGFR results in cell cycle arrest, apoptosis or dedifferentiation of cancer cells, suggesting that EGFR may be an effective therapeutic target.