

**EGF Receptor Antibody**  
**Purified Mouse Monoclonal Antibody (Mab)**  
**Catalog # AP52828****Specification**

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**EGF Receptor Antibody - Product Information**

Application	IP, WB, IHC, ICC
Primary Accession	<a href="#">P00533</a>
Reactivity	Human
Host	Mouse
Clonality	Monoclonal
Isotype	IgG1
Calculated MW	175 KDa

**EGF Receptor Antibody - Additional Information****Gene ID** 1956**Other Names**

Avian erythroblastic leukemia viral (v erb b) oncogene homolog;Cell growth inhibiting protein 40;Cell proliferation inducing protein 61;EGF R;EGFR;EGFR\_HUMAN;Epidermal growth factor receptor (avian erythroblastic leukemia viral (v erb b) oncogene homolog);Epidermal growth factor receptor (erythroblastic leukemia viral (v erb b) oncogene homolog avian);Epidermal growth factor receptor;erbb 1;ErbB;ErbB1;ERBB1;Errp;HER1;mENA;Oncogene ERBB;PIG61;Proto-oncogene c-ErbB-1;Receptor tyrosine protein kinase ErbB 1;Receptor tyrosine-protein kinase ErbB-1;Urogastrone;wa2;Wa5.

**Dilution**

IP~~1:500  
WB~~1:1000  
IHC~~1:100  
ICC~~1:200

**Format**

Purified mouse monoclonal antibody in PBS(pH 7.4) containing with 0.09% (W/V) sodium azide and 50% glycerol.

**Storage**

Store at -20 °C.Stable for 12 months from date of receipt

**EGF Receptor 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:<a href="http://www.uniprot.org/citations/10805725" target="\_blank">10805725</a>, PubMed:<a href="http://www.uniprot.org/citations/27153536" target="\_blank">27153536</a>, PubMed:<a href="http://www.uniprot.org/citations/2790960" target="\_blank">2790960</a>, PubMed:<a href="http://www.uniprot.org/citations/35538033" target="\_blank">35538033</a>). Known ligands include EGF, TGFA/TGF- alpha, AREG, epigen/EPGN, BTC/betacellulin, epiregulin/EREG and HBEGF/heparin-binding EGF (PubMed:<a href="http://www.uniprot.org/citations/12297049" target="\_blank">12297049</a>, PubMed:<a href="http://www.uniprot.org/citations/15611079" target="\_blank">15611079</a>, PubMed:<a href="http://www.uniprot.org/citations/17909029" target="\_blank">17909029</a>, PubMed:<a href="http://www.uniprot.org/citations/20837704" target="\_blank">20837704</a>, PubMed:<a href="http://www.uniprot.org/citations/27153536" target="\_blank">27153536</a>, PubMed:<a href="http://www.uniprot.org/citations/2790960" target="\_blank">2790960</a>, PubMed:<a href="http://www.uniprot.org/citations/7679104" target="\_blank">7679104</a>, PubMed:<a href="http://www.uniprot.org/citations/8144591" target="\_blank">8144591</a>, PubMed:<a href="http://www.uniprot.org/citations/9419975" target="\_blank">9419975</a>). 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:<a href="http://www.uniprot.org/citations/27153536" target="\_blank">27153536</a>). May also activate the NF-kappa-B signaling cascade (PubMed:<a href="http://www.uniprot.org/citations/11116146" target="\_blank">11116146</a>). 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:<a href="http://www.uniprot.org/citations/11602604" target="\_blank">11602604</a>). Also phosphorylates MUC1 and increases its interaction with SRC and CTNNB1/beta-catenin (PubMed:<a href="http://www.uniprot.org/citations/11483589" target="\_blank">11483589</a>). 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:<a href="http://www.uniprot.org/citations/20462955" target="\_blank">20462955</a>). 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:17909029, PubMed:20674546). Endocytosed upon activation by ligand (PubMed:17182860, PubMed:17909029, PubMed:27153536, PubMed:2790960). 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.

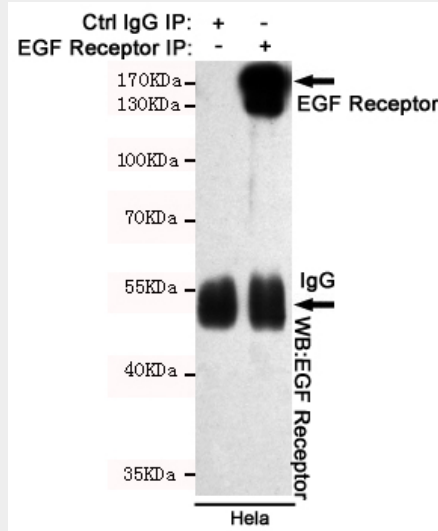
### EGF Receptor Antibody - Protocols

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

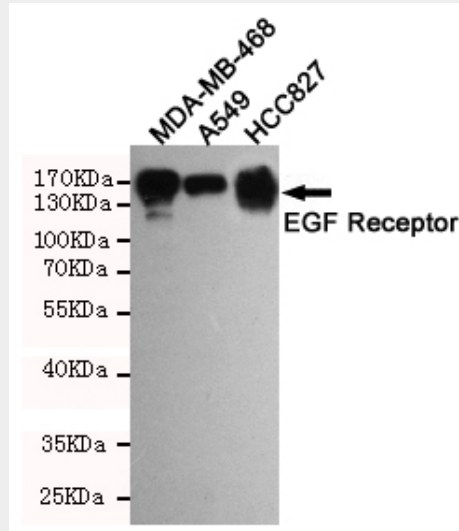
- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)

- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

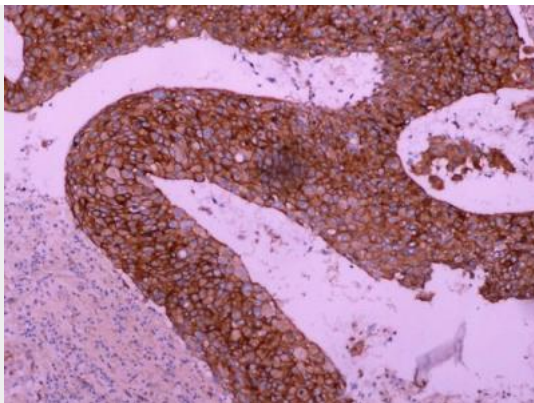
### EGF Receptor Antibody - Images



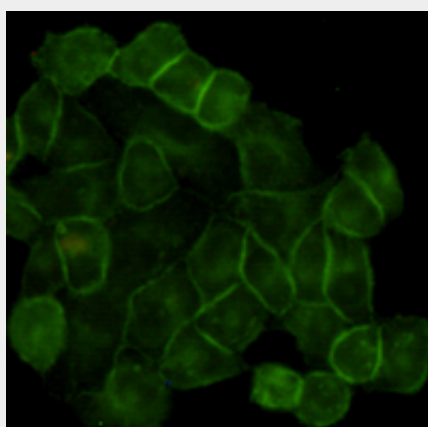
Immunoprecipitation analysis of HeLa cell lysates using EGFR mouse mAb.



Western blot detection of EGFR in HCC827,A549 and MDA-MB-468 cell lysates using EGFR mouse mAb(dilution 1:1000).Predicted band size:134 Kda.Observed band size:175KDa.



Immunohistochemical analysis of paraffin-embedded Lung carcinoma using EGF Receptor (3F12) mouse mAb (1/800 dilution) at the Roche Benchmark XT system.



Immunocytochemistry staining of HeLa cells using EGFR mouse mAb (dilution 1:200).

### **EGF Receptor Antibody - Background**

Receptor tyrosine kinase binding ligands of the EGF family and activating several signaling cascades to convert extracellular cues into appropriate cellular responses. Known ligands include EGF, TGFA/TGF- $\alpha$ , amphiregulin, epigen/EPGN, BTC/betacellulin, epiregulin/EREG and HBEGF/heparin-binding EGF. 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, PLC $\gamma$ -PKC and STATs modules. May also activate the NF- $\kappa$ -B signaling cascade. 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. Also phosphorylates MUC1 and increases its interaction with SRC and CTNNB1/beta-catenin.

### **EGF Receptor Antibody - References**

- Ullrich A., et al. Nature 309:418-425(1984).
- Ilekis J.V., et al. Mol. Reprod. Dev. 41:149-156(1995).
- Reiter J.L., et al. Nucleic Acids Res. 24:4050-4056(1996).
- Ilekis J.V., et al. Gynecol. Oncol. 65:36-41(1997).
- Reiter J.L., et al. Genomics 71:1-20(2001).