

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

Specification

EGF Receptor Antibody - Product Information

| | |
|-------------------|------------------------|
| Application | IP, WB, IHC, ICC |
| Primary Accession | P00533 |
| 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: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 CDC88A/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).

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.

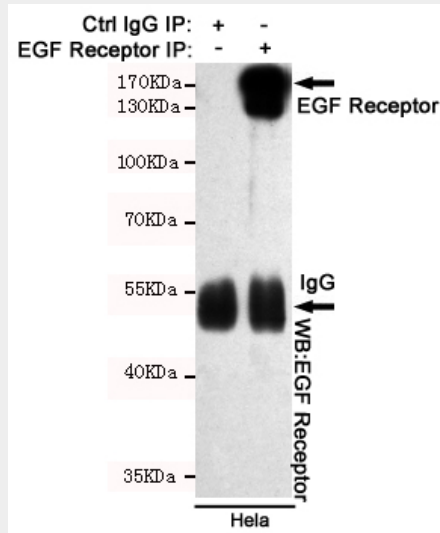
EGF Receptor Antibody - Protocols

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

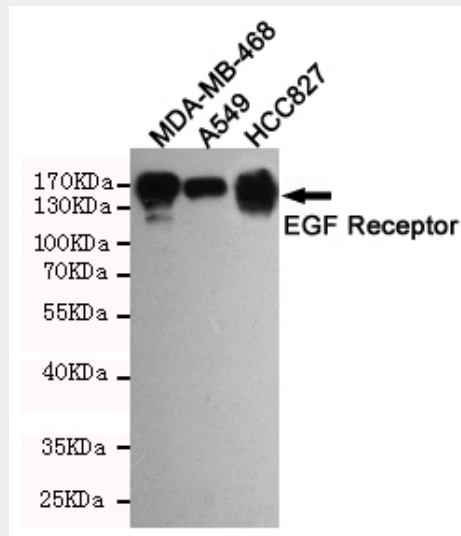
- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)

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

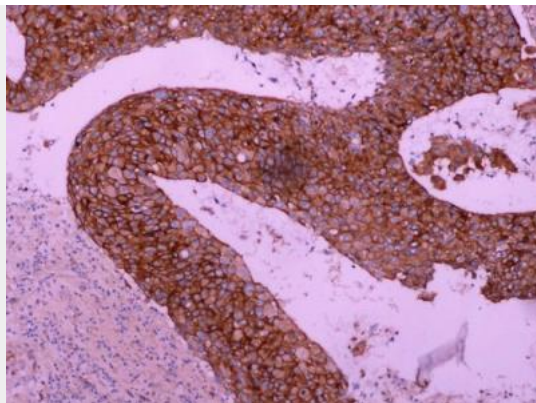
EGF Receptor Antibody - Images



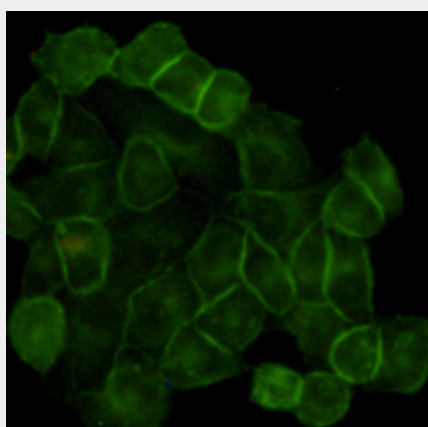
Immunoprecipitation analysis of HeLa cell lysates using EGFR mouse mAb.



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, PLCgamma-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).