10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

# EGFR Antibody (Ab-1172)

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP50011

## Product Information

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| **Application** | WB, IHC |
| **Primary Accession** | P00533 |
| **Reactivity** | Human, Mouse, Rat |
| **Host** | Rabbit |
| **Clonality** | polyclonal |
| **Calculated MW** | 134277 |

## Additional Information

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| **Gene ID** | 1956 |
| **Other Names** | Epidermal growth factor receptor, Proto-oncogene c-ErbB-1, Receptor tyrosine-protein kinase erbB-1, EGFR, ERBB, ERBB1, HER1 |
| **Dilution** | WB~~ 1:1000 IHC~~1:50-1:100 |
| **Format** | Rabbit IgG in phosphate buffered saline (without Mg2+ and Ca2+), pH 7.4, 150mM NaCl, 0.09% (W/V) sodium azide and 50% glycerol. |
| **Storage Conditions** | -20℃ |

## Protein Information

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| **Name** | EGFR {ECO:0000303\|PubMed:32926474, ECO:0000312\|HGNC:HGNC:3236} |
| **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:12297050, PubMed:12620237, PubMed:12873986, PubMed:15374980, PubMed:15590694, PubMed:17115032, PubMed:19560417, PubMed:21258366, PubMed:27153536, PubMed:2790960, PubMed:35538033, PubMed:9488479). 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 (PubMed:10026169, PubMed:17349580, PubMed:18046415, PubMed:19560417, PubMed:19836242). The phosphorylated receptor recruits adapter proteins like GRB2 which in turn activates complex downstream signaling cascades (PubMed:10026169, PubMed:17349580, PubMed:18046415, PubMed:19560417, PubMed:19836242). Activates at least |

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| | 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). Acts as a positive regulator of cGAS-STING signaling by mediating tyrosine phosphorylation of STING1, promoting production of type I interferon (IFN-alpha and IFN-beta), while inhibiting STING1 ability to regulate autophagy (PubMed:32926474). 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. |

## Background

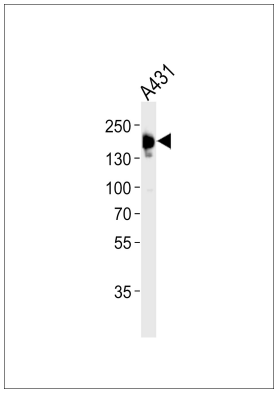
Receptor tyrosine kinase binding ligands of the EGF family and activating several signaling cascades to convert extracellular cues into appropriate cellular responses. Known ligands include EGF, TGFA/TGF-alpha, amphiregulin, epigen/EPGN, BTC/betacellulin, epiregulin/EREG and HBEGF/heparin-binding EGF. 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.

## References

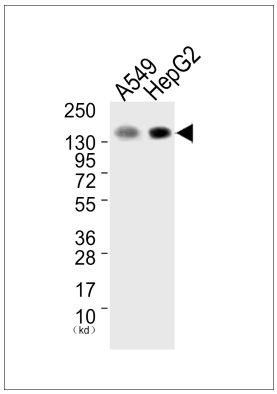

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Reiter J.L.,et al.Nucleic Acids Res. 24:4050-4056(1996).
Ilekis J.V.,et al.Gynecol. Oncol. 65:36-41(1997).
Reiter J.L.,et al.Genomics 71:1-20(2001).


## Images

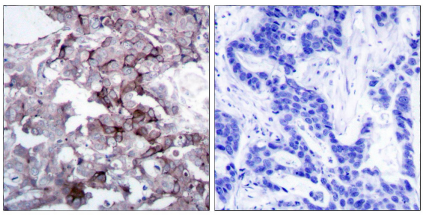
Western blot analysis of lysate from A431 cell line,using EGFR Antibody (Ab-1172)(B7063). B7063 was diluted at




1:1000. A goat anti-rabbit IgG H&L(HRP) at 1:5000 dilution was used as the secondary antibody.Lysate at 35ug.




Western blot analysis of extracts from A549 cells (Lane 1) and HepG2 cells (Lane 2), using EGFR (Ab-1172) Antibody. The lane on the left is treated with synthesized peptide.



Immunohistochemistry analysis of paraffin-embedded human breast carcinoma tissue, using EGFR (Ab-1172) Antibody.

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