

**EGFR (ErbB1) Antibody (N-term)**  
**Purified Rabbit Polyclonal Antibody (Pab)**  
**Catalog # AP7628a**

## Specification

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### EGFR (ErbB1) Antibody (N-term) - Product Information

Application	WB, IHC-P,E
Primary Accession	<a href="#">P00533</a>
Reactivity	Human
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Antigen Region	27-57

### EGFR (ErbB1) Antibody (N-term) - Additional Information

**Gene ID** 1956

#### Other Names

Epidermal growth factor receptor, Proto-oncogene c-ErbB-1, Receptor tyrosine-protein kinase erbB-1, EGFR, ERBB, ERBB1, HER1

#### Target/Specificity

This EGFR (ErbB1) antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 27-57 amino acids from the N-terminal region of human EGFR (ErbB1).

#### Dilution

WB~~1:1000  
IHC-P~~1:50~100

#### Format

Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is prepared by Saturated Ammonium Sulfate (SAS) precipitation followed by dialysis against PBS.

#### Storage

Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

#### Precautions

EGFR (ErbB1) Antibody (N-term) is for research use only and not for use in diagnostic or therapeutic procedures.

### EGFR (ErbB1) Antibody (N-term) - 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 CCDC88A/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

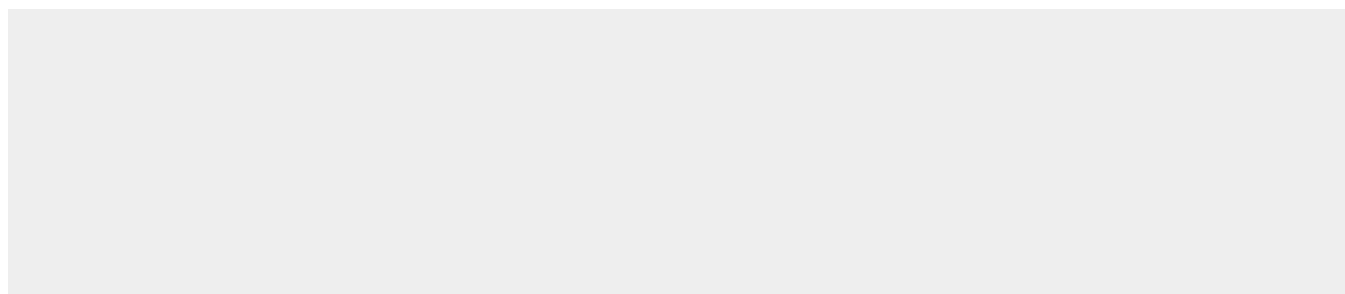
Ubiquitously expressed. Isoform 2 is also expressed in ovarian cancers.

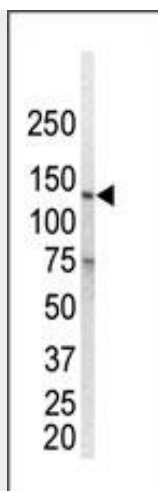
#### EGFR (ErbB1) Antibody (N-term) - Protocols

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

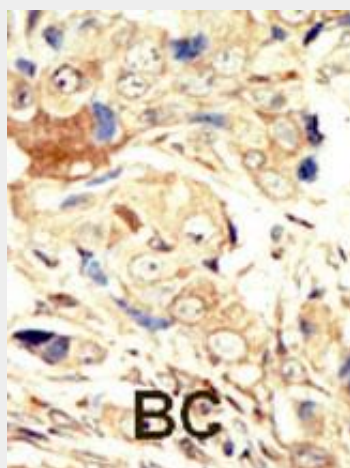
- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

#### EGFR (ErbB1) Antibody (N-term) - Images





Western blot analysis of anti-ErbB1 Pab (Cat. #AP7628a) in ZR-75-1 cell lysate. ErbB1 (arrow) was detected using purified Pab. Secondary HRP-anti-rabbit was used for signal visualization with chemiluminescence.



Formalin-fixed and paraffin-embedded human cancer tissue reacted with the primary antibody, which was peroxidase-conjugated to the secondary antibody, followed by AEC staining. This data demonstrates the use of this antibody for immunohistochemistry; clinical relevance has not been evaluated. BC = breast carcinoma; HC = hepatocarcinoma.

### EGFR (ErbB1) Antibody (N-term) - Background

Protein kinases are enzymes that transfer a phosphate group from a phosphate donor, generally the  $\gamma$  phosphate of ATP, onto an acceptor amino acid in a substrate protein. By this basic mechanism, protein kinases mediate most of the signal transduction in eukaryotic cells, regulating cellular metabolism, transcription, cell cycle progression, cytoskeletal rearrangement and cell movement, apoptosis, and differentiation. With more than 500 gene products, the protein kinase family is one of the largest families of proteins in eukaryotes. The family has been classified in 8 major groups based on sequence comparison of their tyrosine (PTK) or serine/threonine (STK) kinase catalytic domains.

### EGFR (ErbB1) Antibody (N-term) - References

Zanardi, T.A., et al., *J. Virol.* 77(21):11685-11696 (2003). Krug, A.W., et al., *J. Biol. Chem.* 278(44):43060-43066 (2003). Huang, F., et al., *J. Biol. Chem.* 278(44):43411-43417 (2003). He, Y.Y., et al., *J. Biol. Chem.* 278(43):42457-42465 (2003). Hirsch, F.R., et al., *J. Clin. Oncol.* 21(20):3798-3807 (2003).

**EGFR (ErbB1) Antibody (N-term) - Citations**

- [Comprehensive Analysis of Necroptosis Landscape in Skin Cutaneous Melanoma for Appealing its Implications in Prognosis Estimation and Microenvironment Status](#)
- [The Antimetastatic Effect and Underlying Mechanisms of Thioredoxin Reductase Inhibitor Etheselen.](#)
- [Resistance to receptor-blocking therapies primes tumors as targets for HER3-homing nanobiologics.](#)
- [Nuclear translocation of type I transforming growth factor  \$\beta\$  receptor confers a novel function in RNA processing.](#)