10320 Camino Santa Fe Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.622.0609

EGFR (ErbB1) Antibody (N-term)

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP7628a

Specification

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

Application	**WB, IHC-P,E**
Primary Accession	P00533
Reactivity	**Human**
Host	**Rabbit**
Clonality	**Polyclonal**
Isotype	**Rabbit Ig**
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).

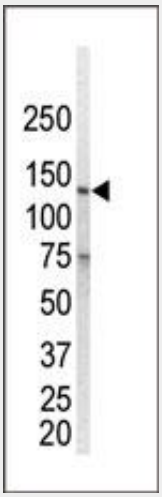
Dilution
WB~~1:1000
IHC-P~~1:50~100

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.

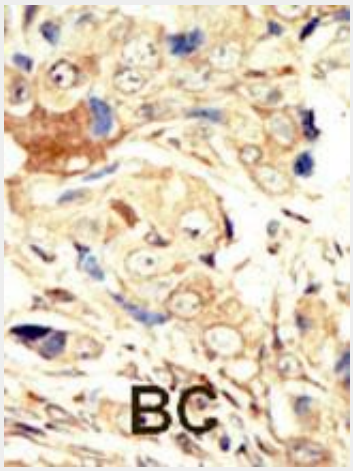
Storage
Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

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



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

Name EGFR

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, PubMed:10805725, PubMed:27153536). Known ligands include EGF, TGFA/TGF-alpha, AREG, epigen/EPGN, BTC/betacellulin, epiregulin/EREG and HBEGF/heparin- binding EGF (PubMed:2790960, PubMed:7679104, PubMed:8144591, PubMed:9419975, PubMed:15611079, PubMed:12297049, PubMed:27153536, PubMed:20837704). 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 phosphate group from a phosphate donor, generally the g 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).

membrane following ligand stimulation, promoting EGFR signaling which triggers cell migration (PubMed:20462955). Plays a role in enhancing learning and memory performance (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). Endocytosed upon activation by ligand (PubMed:2790960, PubMed:17182860, PubMed:27153536). 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 Cytomety
- Cell Culture

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

- The Antimetastatic Effect and Underlying Mechanisms of Thioredoxin Reductase Inhibitor Ethaselen.
- Resistance to receptor-blocking therapies primes tumors as targets for HER3-homing nanobiologics.
- Nuclear translocation of type I transforming growth factor β receptor confers a novel function in RNA processing.