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Phospho-EGFR(Y1016) Antibody

Affinity Purified Rabbit Polyclonal Antibody (Pab)

Catalog # AW5157

Specification

Phospho-EGFR(Y1016) Antibody - Product Information

Application	**DB, WB,E**
Primary Accession	P00533
Other Accession	Q01279
Reactivity	**Human**
Host	**Rabbit**
Clonality	**Polyclonal**
Calculated MW	**H=134 KDa**
Isotype	**Rabbit IgG**
Antigen Source	**HUMAN**

Phospho-EGFR(Y1016) Antibody - Additional Information

Gene ID 1956

Antigen Region
1000-1023

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

Dilution
DB~~1:500
WB~~1:8000

Target/Specificity
This EGFR Antibody is generated from rabbits immunized with a KLH conjugated synthetic phosphopeptide corresponding to amino acid residues surrounding Y1016 of human EGFR.

Format
Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.

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
Phospho-EGFR(Y1016) Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Phospho-EGFR(Y1016) 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 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.

Phospho-EGFR(Y1016) Antibody - Protocols

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

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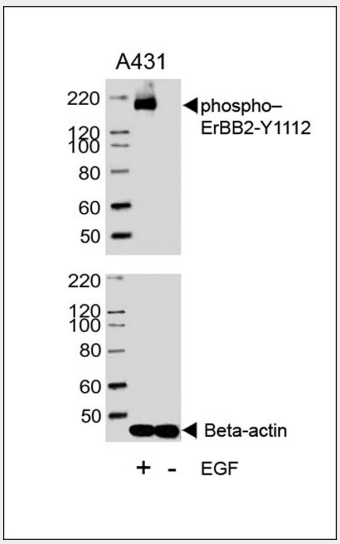
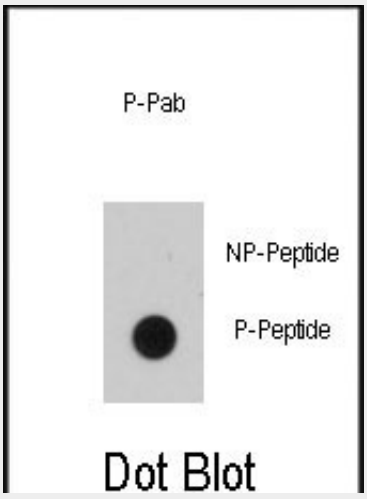
- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

Phospho-EGFR(Y1016) Antibody - Images



Western blot analysis of extracts from A431 cells,untreated or treated with EGF,100ng/ml,using EGFR Antibody (pY1016)(upper) or Beta-actin (lower).



Dot blot analysis of anti-EGFR B1 Phospho-specific Pab (Cat.#AW5157) on nitrocellulose membrane. 50ng of Phospho-peptide or Non Phospho-peptide per dot were adsorbed. Antibody working concentrations are 0.5ug per ml.

Phospho-EGFR(Y1016) Antibody - Background

Epidermal Growth factor receptor (EGFR) is the prototype member of the type 1 receptor tyrosine kinases. EGFR overexpression in tumors indicates poor prognosis and is observed in tumors of the head and neck, brain, bladder, stomach, breast, lung, endometrium, cervix, vulva, ovary,

esophagus, stomach and in squamous cell carcinoma. EGFR is a receptor for EGF, but also for other members of the EGF family, including TGF-alpha, amphiregulin, betacellulin, heparin-binding EGF-like growth factor, GP30 and vaccinia virus growth factor. It is involved in the control of cell growth and differentiation.

Phospho-EGFR(Y1016) Antibody - References

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Adams, T.E., et al., Growth Factors 22(2):89-95 (2004).
Ichinose, J., et al., Biochem. Biophys. Res. Commun. 324(3):1143-1149 (2004).
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Kapoor, G.S., et al., Mol. Cell. Biol. 24(2):823-836 (2004).