

# Phospho-EGFR(S1070) Antibody

Affinity Purified Rabbit Polyclonal Antibody (Pab)

Catalog # AP3423a

## Product Information

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Application	DB, WB, E
Primary Accession	<a href="#">P00533</a>
Reactivity	Human
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB12735
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
Target/Specificity	This EGFR Antibody is generated from rabbits immunized with a KLH conjugated synthetic phosphopeptide corresponding to amino acid residues surrounding S1070 of human EGFR.
Dilution	DB~~1:500 WB~~1:1000 E~~Use at an assay dependent concentration.
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(S1070) Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

## Protein Information

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Name	EGFR ( <a href="#">HGNC:3236</a> )
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: <a href="#">10805725</a> , PubMed: <a href="#">27153536</a> , PubMed: <a href="#">2790960</a> ,

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.

## Background

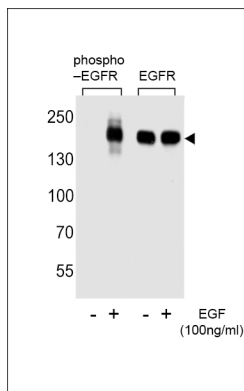
Epidermal Growth factor receptor (EGFR) is the prototype member of the type 1 receptor tyrosine kinases. EGFR overexpression in tumors indicates poor prognosis and is observed in tumors of the head and neck, brain, bladder, stomach, breast, lung, endometrium, cervix, vulva, ovary, esophagus, stomach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

## References

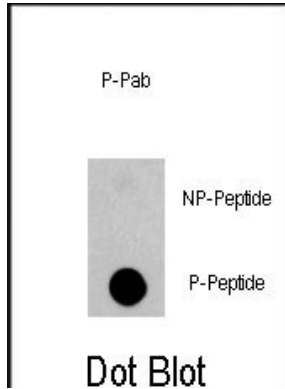
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 Ichinose, J., et al., Biochem. Biophys. Res. Commun. 324(3):1143-1149 (2004).  
 Kuribayashi, A., et al., Endocrinology 145(11):4976-4984 (2004).  
 Kapoor, G.S., et al., Mol. Cell. Biol. 24(2):823-836 (2004).

## Images

Western blot analysis of extracts from A431 cell, untreated or treated with EGF, using



phospho-EGFR-pS1070 (left) or ErBB2 antibody (right).



Dot blot analysis of anti-EGFR-pS1070 Phospho-specific Pab (Cat.#AP3423a) on nitrocellulose membrane. 50ng of Phospho-peptide or Non Phospho-peptide per dot were adsorbed. Antibody working concentrations are 0.5ug per ml.

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