Rabbit EGFR Polyclonal Antibody | anti-EGFR antibody

Phospho-EGFR (Thr693) Antibody

CATALOG #	HOST	REACTIVITY	APPLICATIONS
AAA321448	**Rabbit**	**Human, Mouse, Rat**	**ELISA, Immunocytochemistry, Immunofluorescence, Immunohistochemistry, Western Blot**

PRODUCT SYNONYMS

EGFR; Polyclonal Antibody; Phospho-EGFR (Thr693) Antibody; Avian erythroblastic leukemia viral (v erb b) oncogene homolog; Cell growth inhibiting protein 40; Cell proliferation inducing protein 61; EGF R; EGFR_HUMAN; Epidermal growth factor receptor (avian erythroblastic leukemia viral (v erb b) oncogene homolog); Epidermal growth factor receptor (erythroblastic leukemia viral (v erb b) oncogene homolog avian); Epidermal growth factor receptor; erb-b2 receptor tyrosine kinase 1; ERBB; ERBB1; Errp; HER1; mENA; NISBD2; Oncogen ERBB; PIG61; Proto-oncogene c-ErbB-1; Receptor tyrosine protein kinase ErbB 1; Receptor tyrosine-protein kinase ErbB-1; SA7; Species antigen 7; Urogastrone; v-erb-b Avian erythroblastic leukemia viral oncogen homolog; wa2; Wa5; anti-EGFR antibody

PRODUCT SPECIFICATIONS

Host	Rabbit
Reactivity	Human, Mouse, Rat
Clonality	Polyclonal
Isotype	IgG
Specificity	Phospho-EGFR (Thr693) antibody detects endogenous levels of EGFR only when phosphorylated at Threonine 693
Purity/Purification	From purified rabbit serum by affinity purification via sequential chromatography on phospho-and non-phospho-peptide affinity columns.
Form/Format	Liquid Phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol.
Concentration	1mg/ml (varies by lot)
Sequence Length	1210
Applicable Applications for anti-EGFR antibody	ELISA, ICC (Immunocytochemistry), IF (Immunofluorescence), IHC (Immunohistochemistry), WB (Western Blot)
Immunogen	A synthesized peptide derived from human EGFR around the phosphorylation site of Threonine 693
Subcellular Location	Secreted and Cell Membrane. Endoplasmic Reticulum Membrane. Golgi Apparatus Membrane. Nucleus Membrane. Endosome. Endosome Membrane. Nucleus. In response to EGF, translocated from the cell membrane to the nucleus via golgi and ER. Endocytosed upon activation by ligand. Colocalized with GPER1 in the nucleus of estrogen agonist-induced cancer-associated fibroblasts (CAF).
Tissue Specificity	Ubiquitously expressed. Isoform 2 is also expressed in ovarian cancers.
Predicted Cross Reactivity	**Pig, Bovine, Sheep, Rabbit, Dog, Chicken, Xenopus**
Similarity	Pig (100%), Bovine (100%), Sheep (100%), Rabbit (100%), Dog (100%), Chicken (100%), Xenopus (91%)
Conjugation	Unconjugated
Epitope	Phospho Thr693
Preparation and Storage	Store at -20 degree C. Stable for 12 months from date of receipt.

IMAGES

WB (Western Blot)
Western blot analysis of Phospho-EGFR (Thr693) expression in various lysates

IHC (Immunohistochemisry)
AAA321448 at 1/200 staining human colon carcinoma sections by IHC-P. The tissue was formaldehyde fixed and a heat mediated antigen retrieval step in citrate buffer was performed. The tissue was then blocked and incubated with the antibody for 1.5 hours at 22 degree C. An HRP conjugated goat anti-rabbit antibody was used as the secondary.

IF (Immunofluorescence)
AAA321448 staining BT-20 cells by ICC/IF. Cells were fixed with PFA and permeabilized in 0.1% saponin prior to blocking in 10% serum for 45 minutes at 37 degree C. The primary antibody was diluted 1/400 and incubated with the sample for 1 hour at 37 degree C. A Alexa Fluor 594 conjugated goat polyclonal to rabbit IgG (H+L), diluted 1/600 was used as secondary antibody.

WB (Western Blot)
Western blot analysis of EGFR phosphorylation expression in A431 whole cell lysates, The lane on the left is treated with the antigen-specific peptide.

IF (Immunofluorescence)
AAA321448 staining SK-OV3 by IF/ICC. The sample were fixed with PFA and permeabilized in 0.1% Triton X-100, then blocked in 10% serum for 45 minutes at 25 degree C. The primary antibody was diluted at 1/200 and incubated with the sample for 1 hour at 37 degree C. An Alexa Fluor 594 conjugated goat anti-rabbit IgG (H+L) Ab, diluted at 1/600, was used as the secondary antibody.

ADDITIONAL INFORMATION

Related Product Information for anti-EGFR antibody	Description: EGFR is a receptor tyrosine kinase. Receptor for epidermal growth factor (EGF) and related growth factors 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. 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). Plays a role in enhancing learning and memory performance (By similarity). Subunit Structure: Binding of the ligand triggers homo-and/or heterodimerization of the receptor triggering its autophosphorylation. Heterodimer with ERBB2 (PubMed:10805725). Interacts with ERRFI1; inhibits dimerization of the kinase domain and autophosphorylation (PubMed:18046415). Part of a complex with ERBB2 and either PIK3C2A or PIK3C2B (PubMed:10805725). Interacts with GRB2; an adapter protein coupling the receptor to downstream signaling pathways. Interacts with GAB2; involved in signaling downstream of EGFR. Interacts with STAT3; mediates EGFR downstream signaling in cell proliferation. Interacts with RIPK1; involved in NF-kappa-B activation. Interacts (autophosphorylated) with CBL, CBLB and CBLC; involved in EGFR ubiquitination and regulation. Interacts with SOCS5; regulates EGFR degradation through ELOC-and ELOB-mediated ubiquitination and proteasomal degradation. Interacts with PRMT5; methylates EGFR and enhances interaction with PTPN6. Interacts (phosphorylated) with PTPN6; inhibits EGFR-dependent activation of MAPK/ERK. Interacts with COPG1; essential for regulation of EGF-dependent nuclear transport of EGFR by retrograde trafficking from the Golgi to the ER. Interacts with TNK2; this interaction is dependent on EGF stimulation and kinase activity of EGFR. Interacts with PCNA; positively regulates PCNA (PubMed:17115032). Interacts with PELP1. Interacts with MUC1. Interacts with AP2M1. Interacts with FER. May interact with EPS8; mediates EPS8 phosphorylation. Interacts (via SH2 domains) with GRB2, NCK1 and NCK2 (PubMed:10026169). Interacts with ATX2. Interacts with GAREM1. Interacts (ubiquitinated) with ANKRD13A/B/D; the interaction is direct and may regulate EGFR internalization after EGF stimulation. Interacts with GPER1; the interaction occurs in an estrogen-dependent manner. Interacts (via C-terminal cytoplasmic kinase domain) with ZPR1 (via zinc fingers). Interacts with RNF115 and RNF126 (PubMed:23418353). Interacts with GPRC5A (via its transmembrane domain) (PubMed:25311788). Interacts with FAM83B; positively regulates EGFR inducing its autophosphorylation in absence of stimulation by EGF (PubMed:23912460). Interacts with LAPTM4B; positively correlates with EGFR activation (PubMed:28479384). Interacts with STX19 (PubMed:16420529). Post-translational Modifications: Phosphorylated on Tyr residues in response to EGF (PubMed:27153536). Phosphorylation at Ser-695 is partial and occurs only if Thr-693 is phosphorylated. Phosphorylation at Thr-678 and Thr-693 by PRKD1 inhibits EGF-induced MAPK8/JNK1 activation. Dephosphorylation by PTPRJ prevents endocytosis and stabilizes the receptor at the plasma membrane. Autophosphorylation at Tyr-1197 is stimulated by methylation at Arg-1199 and enhances interaction with PTPN6. Autophosphorylation at Tyr-1092 and/or Tyr-1110 recruits STAT3. Dephosphorylated by PTPN1 and PTPN2. Monoubiquitinated and polyubiquitinated upon EGF stimulation; which does not affect tyrosine kinase activity or signaling capacity but may play a role in lysosomal targeting (PubMed:27153536). Polyubiquitin linkage is mainly through 'Lys-63', but linkage through 'Lys-48', 'Lys-11' and 'Lys-29' also occurs. Deubiquitination by OTUD7B prevents degradation. Ubiquitinated by RNF115 and RNF126 (By similarity). Palmitoylated on Cys residues by ZDHHC20. Palmitoylation inhibits internalization after ligand binding, and increases the persistence of tyrosine-phosphorylated EGFR at the cell membrane. Palmitoylation increases the amplitude and duration of EGFR signaling. Methylated. Methylation at Arg-1199 by PRMT5 stimulates phosphorylation at Tyr-1197. Similarity: Belongs to the protein kinase superfamily. Tyr protein kinase family. EGF receptor subfamily.

NCBI AND UNIPROT INFORMATION

NCBI GI #	29725609
NCBI GeneID	1956
NCBI Accession #	NP_005219.2

NCBI GenBank Nucleotide #	NM_005228.4
UniProt Accession #	P00533; O00688; O00732; P06268; Q14225; Q68GS5; Q92795; Q9BZS2; Q9GZX1; Q9H2C9; Q9H3C9; Q9UMD7
Molecular Weight	Observed: 175 kDa Predicted: 135 kDa
NCBI Official Full Name	epidermal growth factor receptor isoform a
NCBI Official Synonym Full Names	epidermal growth factor receptor
NCBI Official Symbol	EGFR
NCBI Official Synonym Symbols	ERBB; HER1; mENA; ERBB1; PIG61; NISBD2
NCBI Protein Information	epidermal growth factor receptor
UniProt Protein Name	Epidermal growth factor receptor
UniProt Gene Name	**EGFR**
UniProt Synonym Gene Names	ERBB; ERBB1; HER1

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.

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