

**Anti-EGFR (RABBIT) Antibody**  
**EGFR Antibody**  
**Catalog # ASR5331****Specification**

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**Anti-EGFR (RABBIT) Antibody - Product Information**

Host	Rabbit
Conjugate	Unconjugated
Target Species	Human
Reactivity	Human
Clonality	Polyclonal
Application	WB, IHC, E, I, LCI
Application Note	This affinity purified antibody has been tested for use in ELISA and western blot. Specific conditions for reactivity should be optimized by the end user. Expect a band approximately 170 kDa in size corresponding to EGFR protein by western blotting in the appropriate cell lysate or extract. This antibody detects both non-phosphorylated and phosphorylated EGFR at residue Y1197.
Physical State	Liquid (sterile filtered)
Buffer	0.02 M Potassium Phosphate, 0.15 M Sodium Chloride, pH 7.2
Immunogen	This affinity purified antibody was prepared from whole rabbit serum produced by repeated immunizations with a synthetic peptide corresponding to the C-Terminus near amino acids 1175-1200 of human EGFR protein.
Preservative	0.01% (w/v) Sodium Azide

**Anti-EGFR (RABBIT) Antibody - Additional Information****Gene ID** 1956**Other Names**  
1956**Purity**

EGFR Antibody is directed against human epidermal growth factor receptor (EGFR) and is useful in determining its presence in ELISA and western blotting experiments. This antibody can detect EGFR from human, mouse and rat sources. Reactivity of this antibody with EGFR from other species is unknown.

**Storage Condition**

Store Anti-EGFR at -20° C prior to opening. Aliquot contents and freeze at -20° C or below for extended storage. Avoid cycles of freezing and thawing. Centrifuge product if not completely clear after standing at room temperature. This product is stable for several weeks at 4° C as an

undiluted liquid. Dilute only prior to immediate use.

### Precautions Note

This product is for research use only and is not intended for therapeutic or diagnostic applications.

## Anti-EGFR (RABBIT) 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](http://www.uniprot.org/citations/10805725), PubMed:[27153536](http://www.uniprot.org/citations/27153536), PubMed:[2790960](http://www.uniprot.org/citations/2790960), PubMed:[35538033](http://www.uniprot.org/citations/35538033)). Known ligands include EGF, TGFA/TGF- alpha, AREG, epigen/EPGN, BTC/betacellulin, epiregulin/EREG and HBEGF/heparin-binding EGF (PubMed:[12297049](http://www.uniprot.org/citations/12297049), PubMed:[15611079](http://www.uniprot.org/citations/15611079), PubMed:[17909029](http://www.uniprot.org/citations/17909029), PubMed:[20837704](http://www.uniprot.org/citations/20837704), PubMed:[27153536](http://www.uniprot.org/citations/27153536), PubMed:[2790960](http://www.uniprot.org/citations/2790960), PubMed:[7679104](http://www.uniprot.org/citations/7679104), PubMed:[8144591](http://www.uniprot.org/citations/8144591), PubMed:[9419975](http://www.uniprot.org/citations/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](http://www.uniprot.org/citations/27153536)). May also activate the NF-kappa-B signaling cascade (PubMed:[11116146](http://www.uniprot.org/citations/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](http://www.uniprot.org/citations/11602604)). Also phosphorylates MUC1 and increases its interaction with SRC and CTNNB1/beta-catenin (PubMed:[11483589](http://www.uniprot.org/citations/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](http://www.uniprot.org/citations/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

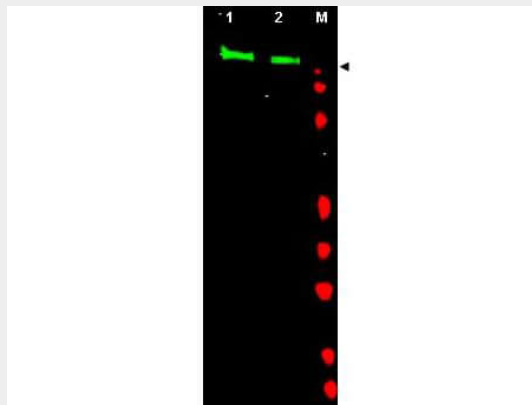
Ubiquitously expressed. Isoform 2 is also expressed in ovarian cancers.

### Anti-EGFR (RABBIT) Antibody - 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](#)

### Anti-EGFR (RABBIT) Antibody - Images



Western blot using Rockland's Affinity Purified anti-EGFR antibody shows detection of a band at ~170 kDa corresponding to human EGFR (arrowhead). Lane 1: unstimulated A431 whole cell lysate (p/n W09-000-361). Lane 2: EGF (50 ng/ml for 15 min) stimulated A431 whole cell lysates (p/n W09-000-362). Approximately 30  $\mu$ g of lysate was separated on a 4-20% Tris-Glycine gel by SDS-PAGE and transferred onto nitrocellulose. After blocking the membrane was probed with the primary antibody diluted to 1:1,000. Reaction occurred overnight at 4° C followed by washes and reaction with a 1:10,000 dilution of IRDye800 conjugated Gt-a-Rabbit IgG [H&L] MX (p/n 611-132-122) for 45 min at room temperature (800 nm channel, green). Molecular weight estimation was made by comparison to prestained MW markers in lane M (700 nm channel, red). IRDye800 fluorescence image was captured using the Odyssey® Infrared Imaging System developed by LI-COR. IRDye is a trademark of LI-COR, Inc. Other detection systems will yield similar results.

### Anti-EGFR (RABBIT) Antibody - Background

Anti-EGFR Antibody is ideal for Western Blotting, ELISA and IHC. EGFR is a transmembrane glycoprotein that is a member of a family of protein tyrosine kinases crucial in maintaining a normal balance in cell growth and development. Growth factor receptors are involved not only in promoting the proliferation of normal cells but also in the aberrant growth of many types of human tumors. For example, the epidermal growth factor receptor (EGFR) is mutated and/or overexpressed in many common solid human squamous cell carcinomas including breast, brain,

bladder, lung, gastric, head & neck, esophagus, cervix, vulva, ovary, and endometrium. Over-expression of the EGFR gene occurs in carcinomas with and without gene amplification. EGFR and erbB-2 are particularly important in breast cancer because increased production or activation has been associated with poor prognosis. EGFR belongs to a family of growth factor receptors, which also includes ErbB-2/HER-2/neu, ErbB-3/HER-3/neu and ErbB-4/HER-4/neu. EGFR can heterodimerize with each of the members of this family.