

**EGFR (Epidermal Growth Factor Receptor) Antibody - With BSA and Azide**  
**Mouse Monoclonal Antibody [Clone 31G7 ]**  
**Catalog # AH11174**

**Specification**

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**EGFR (Epidermal Growth Factor Receptor) Antibody - With BSA and Azide - Product Information**

Application	,2,3,4,
Primary Accession	<a href="#">P00533</a>
Other Accession	<a href="#">1956</a> , <a href="#">488293</a>
Reactivity	Human
Host	Mouse
Clonality	Monoclonal
Isotype	Mouse / IgG1, kappa
Calculated MW	~170kDa (wild type) and ~145kDa (VIII variant) kDa

**EGFR (Epidermal Growth Factor Receptor) Antibody - With BSA and Azide - Additional Information**

**Gene ID** 1956

**Other Names**

Epidermal growth factor receptor, 2.7.10.1, Proto-oncogene c-ErbB-1, Receptor tyrosine-protein kinase erbB-1, EGFR, ERBB, ERBB1, HER1

**Storage**

Store at 2 to 8°C. Antibody is stable for 24 months.

**Precautions**

EGFR (Epidermal Growth Factor Receptor) Antibody - With BSA and Azide is for research use only and not for use in diagnostic or therapeutic procedures.

**EGFR (Epidermal Growth Factor Receptor) Antibody - With BSA and Azide - 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:<a href="http://www.uniprot.org/citations/12297049" target="\_blank">12297049</a>, PubMed:<a href="http://www.uniprot.org/citations/15611079" target="\_blank">15611079</a>, PubMed:<a href="http://www.uniprot.org/citations/17909029" target="\_blank">17909029</a>, PubMed:<a href="http://www.uniprot.org/citations/20837704" target="\_blank">20837704</a>, PubMed:<a href="http://www.uniprot.org/citations/27153536" target="\_blank">27153536</a>, PubMed:<a href="http://www.uniprot.org/citations/2790960" target="\_blank">2790960</a>, PubMed:<a href="http://www.uniprot.org/citations/7679104" target="\_blank">7679104</a>, PubMed:<a href="http://www.uniprot.org/citations/8144591" target="\_blank">8144591</a>, PubMed:<a href="http://www.uniprot.org/citations/9419975" target="\_blank">9419975</a>). 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:<a href="http://www.uniprot.org/citations/27153536" target="\_blank">27153536</a>). May also activate the NF-kappa-B signaling cascade (PubMed:<a href="http://www.uniprot.org/citations/11116146" target="\_blank">11116146</a>). 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:<a href="http://www.uniprot.org/citations/11602604" target="\_blank">11602604</a>). Also phosphorylates MUC1 and increases its interaction with SRC and CTNNB1/beta-catenin (PubMed:<a href="http://www.uniprot.org/citations/11483589" target="\_blank">11483589</a>). Positively regulates cell migration via interaction with CDC88A/GIV which retains EGFR at the cell membrane following ligand stimulation, promoting EGFR signaling which triggers cell migration (PubMed:<a href="http://www.uniprot.org/citations/20462955" target="\_blank">20462955</a>). 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

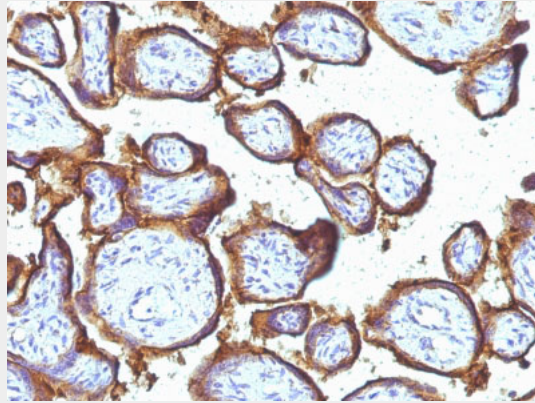
Ubiquitously expressed. Isoform 2 is also expressed in ovarian cancers.

### EGFR (Epidermal Growth Factor Receptor) Antibody - With BSA and Azide - 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](#)

### EGFR (Epidermal Growth Factor Receptor) Antibody - With BSA and Azide - Images



Formalin-fixed, paraffin-embedded human Placenta stained with EGFR Monoclonal Antibody (31G7).

#### **EGFR (Epidermal Growth Factor Receptor) Antibody - With BSA and Azide - Background**

This MAb recognizes a protein of 170kDa, identified as EGFR. EGFR is type I receptor tyrosine kinase with sequence homology to erbB-1, -2, -3 -4 or HER-1, -2, -3 -4. It binds to Epidermal Growth Factor (EGF), Transforming Growth Factor- $\alpha$  (TGF- $\alpha$ ), Heparin-binding EGF (HB-EGF), amphiregulin,  $\beta$ cellulin and epiregulin. EGFR is overexpressed in tumors of breast, brain, bladder, lung, gastric, head & neck, esophagus, cervix, vulva, ovary, and endometrium. It is predominantly present in squamous cell carcinomas.

#### **EGFR (Epidermal Growth Factor Receptor) Antibody - With BSA and Azide - References**

Tungekar MF et. al. Journal of Clinical Pathology. 51: 583-587 (1998). |