

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

Specification

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

Application	IHC, IF, FC
Primary Accession	P00533
Other Accession	1956, 488293
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

Application Note

IHC~~1:100~500
IF~~1:50~200
FC~~1:10~50

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, PubMed:<a

[>27153536](http://www.uniprot.org/citations/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 CDC88A/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.

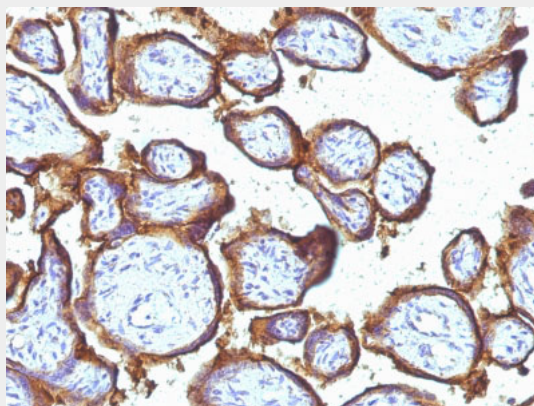
EGFR (Epidermal Growth Factor Receptor) Antibody - With BSA and Azide - Protocols

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- α (TGF- α), Heparin-binding EGF (HB-EGF), amphiregulin, β 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). |