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Anti-EGFR Antibody

Mouse Monoclonal Antibody
Catalog # AH13186

Product Information

Application	IHC-P, IF, FC
Primary Accession	P00533
Other Accession	488293
Reactivity	Human
Host	Mouse
Clonality	Monoclonal
Isotype	Mouse / IgG1
Clone Names	GFR/1667
Calculated MW	134277

Additional Information

Gene ID	1956
Other Names	Erbb1; ERBB1; Errp; HER1; mENA; PIG61; Proto-oncogene c-ErbB-1; Receptor Tyrosine Protein Kinase; ErbB1; Urogastrone; wa2; Wa5
Application Note	Flow Cytometry (0.5-1ug/million cells); Immunofluorescence (1-2ug/ml); ,Immunohistology (Formalin-fixed) (1-2ug/ml for 30 minutes at RT),(Staining of formalin-fixed tissues requires boiling tissue sections in 10mM citrate buffer, pH 6.0, for 10-20 min followed by cooling at RT for 20 minutes),Optimal dilution for a specific application should be determined.
Format	200ug/ml of Ab purified from Bioreactor Concentrate by Protein A/G. Prepared in 10mM PBS with 0.05% BSA & 0.05% azide. Also available WITHOUT BSA & azide at 1mg/ml.
Storage	Store at 2 to 8°C.Antibody is stable for 24 months.
Precautions	Anti-EGFR Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

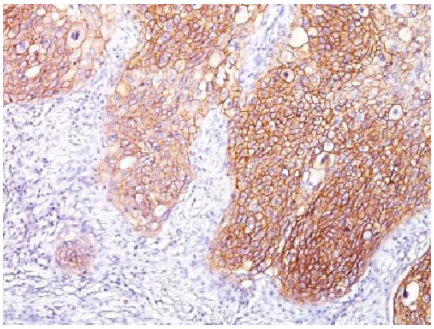
Name	EGFR (HGNC:3236)
Synonyms	ERBB, ERBB1, HER1
Function	Receptor tyrosine kinase binding ligands of the EGF family and activating several signaling cascades to convert extracellular cues into appropriate cellular responses (PubMed:10805725, PubMed:27153536, PubMed:2790960,

	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 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

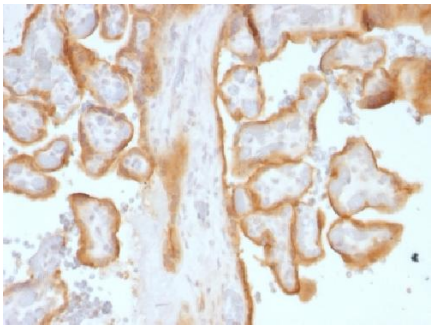
This MAb recognizes a protein of 170kDa, identified as EGFR. EGFR is type I receptor tyrosine kinase with sequence homology to erbB-1, -2, -3 -4 or HER-1, -2, -3 -4. It binds to Epidermal Growth Factor (EGF), Transforming Growth Factor-a (TGF-a), Heparin-binding EGF (HB-EGF), amphiregulin, betacellulin 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.

Images



Formalin-fixed, paraffin-embedded human Lung SCC stained with EGFR Monoclonal Antibody (GFR/1667).

Formalin-fixed, paraffin-embedded human Lung SCC



stained with EGFR Monoclonal Antibody (GFR/1667).