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Anti-EGFR Picoband Antibody

Catalog # ABO12549

Product Information

Application	WB
Primary Accession	Q01279
Host	Rabbit
Reactivity	Mouse
Clonality	Polyclonal
Format	Lyophilized
Description	Rabbit IgG polyclonal antibody for Epidermal growth factor receptor(EGFR) detection. Tested with WB in Mouse.
Reconstitution	Add 0.2ml of distilled water will yield a concentration of 500ug/ml.

Additional Information

Gene ID	13649
Other Names	Epidermal growth factor receptor, 2.7.10.1, Egfr
Calculated MW	134853
Application Details	Western blot, 0.1-0.5 □g/ml, Mouse
Subcellular Localization	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 . 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) (By similarity). .
Source	Eukaryota
Protein Name	Epidermal growth factor receptor
Contents	Each vial contains 5mg BSA, 0.9mg NaCl, 0.2mg Na2HPO4, 0.05mg NaN3.
Immunogen	E. coli-derived mouse EGFR recombinant protein (Position: L25-L249). Mouse EGFR shares 88% amino acid (aa) sequence identity with human EGFR.
Purification	Immunogen affinity purified.
Cross Reactivity	No cross reactivity with other proteins.

Storage	At -20˚C for one year. After r˚Constitution, at 4˚C for one month. It˚Can also be aliquotted and stored frozen at -20˚C for a longer time.Avoid repeated freezing and thawing.

Protein Information

Name	Egfr {ECO:0000312|MGI:MGI:95294}
Function	Receptor tyrosine kinase binding ligands of the EGF family and activating several signaling cascades to convert extracellular cues into appropriate cellular responses (PubMed:10953014, PubMed:8404850). Known ligands include EGF, TGFA/TGF-alpha, AREG, epigen/EPGN, BTC/betacellulin, epiregulin/EREG and HBEGF/heparin-binding EGF (By similarity). Ligand binding triggers receptor homo- and/or heterodimerization and autophosphorylation on key cytoplasmic residues (By similarity). The phosphorylated receptor recruits adapter proteins like GRB2 which in turn activates complex downstream signaling cascades (By similarity). Activates at least 4 major downstream signaling cascades including the RAS-RAF-MEK-ERK, PI3 kinase-AKT, PLCgamma-PKC and STATs modules (By similarity). May also activate the NF-kappa-B signaling cascade (By similarity). 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 (By similarity). Also phosphorylates MUC1 and increases its interaction with SRC and CTNNB1/beta-catenin (By similarity). 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 (By similarity). Acts as a positive regulator of cGAS-STING signaling by mediating tyrosine phosphorylation of STING1, promoting production of type I interferon (IFN-alpha and IFN-beta), while inhibiting STING1 ability to regulate autophagy (By similarity). Plays a role in enhancing learning and memory performance (PubMed:20639532). Plays a role in mammalian pain signaling (long-lasting hypersensitivity) (PubMed:35131940).
Cellular Location	Cell membrane {ECO:0000250|UniProtKB:P00533}; Single-pass type I membrane protein {ECO:0000250|UniProtKB:P00533} Endoplasmic reticulum membrane {ECO:0000250|UniProtKB:P00533}; Single- pass type I membrane protein {ECO:0000250|UniProtKB:P00533}. Golgi apparatus membrane {ECO:0000250|UniProtKB:P00533}; Single-pass type I membrane protein {ECO:0000250|UniProtKB:P00533}. Nucleus membrane {ECO:0000250|UniProtKB:P00533}; Single-pass type I membrane protein {ECO:0000250|UniProtKB:P00533}. Endosome {ECO:0000250|UniProtKB:P00533}. Endosome membrane {ECO:0000250|UniProtKB:P00533}. Nucleus {ECO:0000250|UniProtKB:P00533} Note=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). {ECO:0000250|UniProtKB:P00533}

Background

The epidermal growth factor receptor (EGFR; ErbB-1; HER1 in humans) is the cell-surface receptor for members of the epidermal growth factor family (EGF-family) of extracellular protein ligands. It is a member of the ErbB family of receptors, a subfamily of four closely related receptor tyrosine kinases: EGFR (ErbB-1), HER2/c-neu (ErbB-2), Her 3 (ErbB-3) and Her 4 (ErbB-4). EGFR exists on the cell surface and is activated by binding of its specific ligands, including epidermal growth factor and transforming growth factor □± (TGF □±). EGFR and its ligands are cell signaling molecules involved in diverse cellular functions, including cell

proliferation, differentiation, motility, and survival, and in tissue development. Mutations that lead to EGFR overexpression (known as upregulation) or overactivity have been associated with a number of cancers, including lung cancer and glioblastoma multiforme. In this latter case a more or less specific mutation of EGFR, called EGFRvIII is often observed.

Images



Western blot analysis of EGFR expression in mouse liver extract (lane 1). EGFR at 230KD was detected using rabbit anti- EGFR Antigen Affinity purified polyclonal antibody (Catalog # ABO12549) at0.5 ??g/mL. The blot was developed using chemiluminescence (ECL) method .

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.