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Mouse Egfr Antibody (P1116)

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP20926a

Product Information

Application	WB, E
Primary Accession	Q01279
Reactivity	Mouse
Predicted	Rat, Canine, Rabbit
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB50272
Calculated MW	134853

Additional Information

Gene ID	13649
Other Names	Epidermal growth factor receptor, Egfr
Target/Specificity	This Mouse Egfr antibody is generated from a rabbit immunized with a KLH conjugated synthetic peptide between 1116-1130 amino acids from the human region of Mouse Egfr.
Dilution	WB~~1:1000 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.
Storage	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	Mouse Egfr Antibody (P1116) is for research use only and not for use in diagnostic or therapeutic procedures.

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}

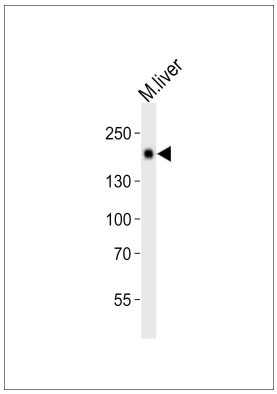
Background

Receptor tyrosine kinase binding ligands of the EGF family and activating several signaling cascades to convert extracellular cues into appropriate cellular responses. Known ligands include EGF, TGFA/TGF-alpha, amphiregulin, epigen/EPGN, BTC/betacellulin, epiregulin/EREG and HBEGF/heparin-binding EGF. 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. May also activate the NF-kappa-B signaling cascade. 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. Also phosphorylates MUC1 and increases its interaction with SRC and CTNNB1/beta-catenin.

References

Avivi A.,et al.Oncogene 7:1957-1962(1992).
Paria B.C.,et al.Proc. Natl. Acad. Sci. U.S.A. 90:55-59(1993).
Hibbs M.L.,et al.Submitted (APR-1994) to the EMBL/GenBank/DDBJ databases.
Luetteke N.C.,et al.Genes Dev. 8:399-413(1994).
Avivi A.,et al.Oncogene 6:673-676(1991).

Images



Western blot analysis of lysate from mouse liver tissue, using Egfr Antibody (P1116)(Cat. #AP20926a). AP20926a was diluted at 1:1000. A goat anti-rabbit IgG H&L(HRP) at 1:10000 dilution was used as the secondary antibody. Lysate at 20ug.

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