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KD-Validated Anti-Epidermal Growth Factor Receptor Mouse Monoclonal Antibody

Mouse monoclonal antibody
Catalog # AGI1919

Specification

KD-Validated Anti-Epidermal Growth Factor Receptor Mouse Monoclonal Antibody - Product Information

Application	**WB, FC, ICC**
Primary Accession	P00533
Reactivity	**Human**
Clonality	**Monoclonal**
Isotype	**Mouse IgG1**
Calculated MW	**Predicted, 134 kDa, observed, 170 kDa KDa**
Gene Name	**EGFR**
Aliases	**EGFR; Epidermal Growth Factor Receptor; ERBB1; ERRP; ERBB; Receptor Tyrosine-Protein Kinase ErbB-1; Erb-B2 Receptor Tyrosine Kinase 1; Proto-Oncogene C-ErbB-1; EC 2.7.10.1; HER1; Epidermal Growth Factor Receptor (Avian Erythroblastic Leukemia Viral (V-Erb-B) Oncogene Homolog); Erythroblastic Leukemia Viral (V-Erb-B) Oncogene Homolog (Avian); Avian Erythroblastic Leukemia Viral (V-Erb-B) Oncogene Homolog; Epidermal Growth Factor Receptor Tyrosine Kinase Domain; Cell Proliferation-Inducing Protein 61; Cell Growth Inhibiting Protein 40; EGFR VIII; EC 2.7.10; NISBD2; PIG61; MENA**
Immunogen	**Recombinant protein of human EGFR**

KD-Validated Anti-Epidermal Growth Factor Receptor Mouse Monoclonal Antibody - 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 (HGNC:3236), ERBB, ERBB1, HER1

KD-Validated Anti-Epidermal Growth Factor Receptor Mouse Monoclonal Antibody - 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.

KD-Validated Anti-Epidermal Growth Factor Receptor Mouse Monoclonal Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

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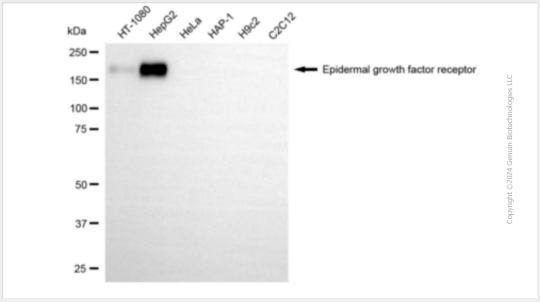
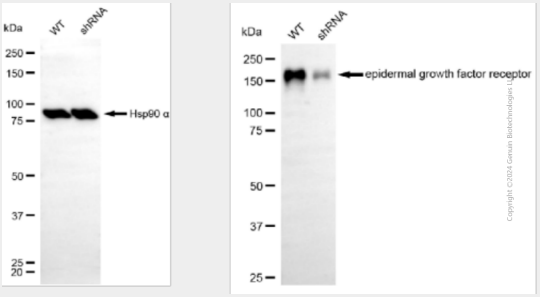
- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

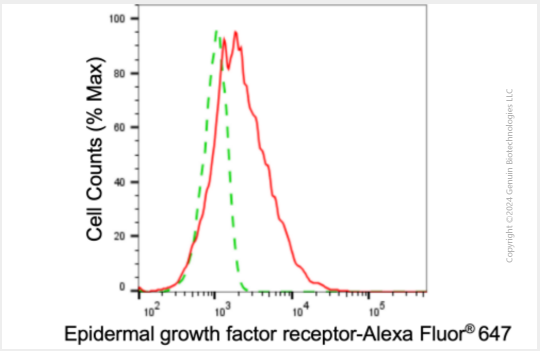
KD-Validated Anti-Epidermal Growth Factor Receptor Mouse Monoclonal Antibody - Images



Western blotting analysis using anti-epidermal growth factor receptor antibody (Cat#AGI1919). Total cell lysates (30 µg) from various cell lines were loaded and separated by SDS-PAGE. The blot was incubated with anti-epidermal growth factor receptor antibody (Cat#AGI1919, 1:5,000) and HRP-conjugated goat anti-mouse secondary antibody respectively.



Western blotting analysis using anti-epidermal growth factor receptor antibody (Cat#AGI1919). Epidermal growth factor receptor expression in wild type (WT) and epidermal growth factor receptor (EGFR) shRNA knockdown (KD) HepG2 cells with 20 µg of total cell lysates. Hsp90 α serves as a loading control. The blot was incubated with anti-epidermal growth factor receptor antibody (Cat#AGI1919, 1:5,000) and HRP-conjugated goat anti-mouse secondary antibody respectively.



Flow cytometric analysis of Epidermal growth factor receptor expression in HepG2 cells using

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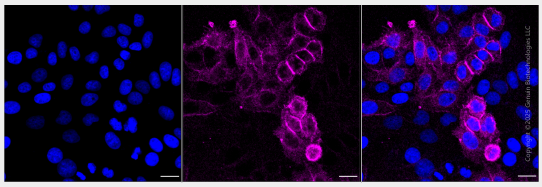
anti-Epidermal growth factor receptor antibody (Cat#AGI1919, 1:2,000). Green, isotype control; red, Epidermal growth factor receptor.



Immunocytochemical staining of HepG2 cells with anti-Epidermal growth factor receptor antibody (Cat#AGI1919, 1:1,000). Nuclei were stained blue with DAPI; Epidermal growth factor receptor was stained magenta with Alexa Fluor® 647. Images were taken using Leica stellaris 5. Protein abundance based on laser Intensity and Smart Gain Low. Scale bar, 20 µm.