

**KD-Validated Anti-Epidermal Growth Factor Receptor Mouse Monoclonal Antibody**  
**Mouse monoclonal antibody**  
**Catalog # AGI1920****Specification****KD-Validated Anti-Epidermal Growth Factor Receptor Mouse Monoclonal Antibody - Product Information**

Application	WB, FC, ICC
Primary Accession	<a href="#">P00533</a>
Reactivity	Human
Clonality	Monoclonal
Isotype	Mouse IgG2b
Calculated MW	Predicted, 134 kDa, Observed, 170 kDa
Gene Name	KDa
Aliases	EGFR EGFR; Epidermal Growth Factor Receptor; ERBB1; ERBP; 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
<b>Other Names</b>	
Epidermal growth factor receptor, 2.7.10.1, Proto-oncogene c-ErbB-1, Receptor tyrosine-protein kinase erbB-1, EGFR (<a href="http://www.genenames.org/cgi-bin/gene_symbol_report?hgnc_id=3236" target="_blank">HGNC:3236</a>), 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:<a href="http://www.uniprot.org/citations/10805725" target="\_blank">10805725</a>, PubMed:<a href="http://www.uniprot.org/citations/27153536" target="\_blank">27153536</a>, PubMed:<a href="http://www.uniprot.org/citations/2790960" target="\_blank">2790960</a>, PubMed:<a href="http://www.uniprot.org/citations/35538033" target="\_blank">35538033</a>). Known ligands include EGF, TGFA/TGF- alpha, AREG, epigen/EPGN, BTC/betacellulin, epiregulin/EREG and HBEGF/heparin-binding EGF (PubMed:<a href="http://www.uniprot.org/citations/12297049" target="\_blank">12297049</a>, PubMed:<a href="http://www.uniprot.org/citations/15611079" target="\_blank">15611079</a>, PubMed:<a href="http://www.uniprot.org/citations/17909029" target="\_blank">17909029</a>, PubMed:<a href="http://www.uniprot.org/citations/20837704" target="\_blank">20837704</a>, PubMed:<a href="http://www.uniprot.org/citations/27153536" target="\_blank">27153536</a>, PubMed:<a href="http://www.uniprot.org/citations/2790960" target="\_blank">2790960</a>, PubMed:<a href="http://www.uniprot.org/citations/7679104" target="\_blank">7679104</a>, PubMed:<a href="http://www.uniprot.org/citations/8144591" target="\_blank">8144591</a>, PubMed:<a href="http://www.uniprot.org/citations/9419975" target="\_blank">9419975</a>). 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:<a href="http://www.uniprot.org/citations/27153536" target="\_blank">27153536</a>). May also activate the NF-kappa-B signaling cascade (PubMed:<a href="http://www.uniprot.org/citations/11116146" target="\_blank">11116146</a>). 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:<a href="http://www.uniprot.org/citations/11602604" target="\_blank">11602604</a>). Also phosphorylates MUC1 and increases its interaction with SRC and CTNNB1/beta-catenin (PubMed:<a href="http://www.uniprot.org/citations/11483589" target="\_blank">11483589</a>). 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:<a href="http://www.uniprot.org/citations/20462955" target="\_blank">20462955</a>). 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**

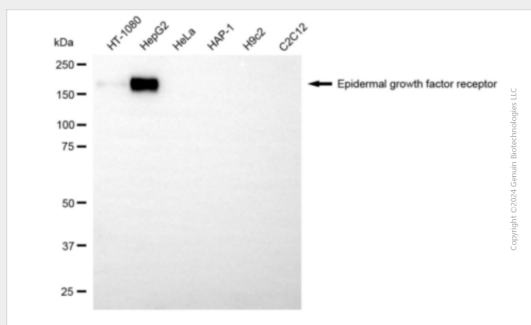
Ubiquitously expressed. Isoform 2 is also expressed in ovarian cancers.

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

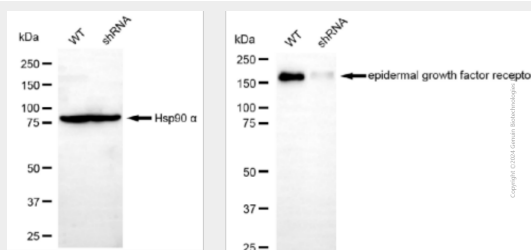
Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

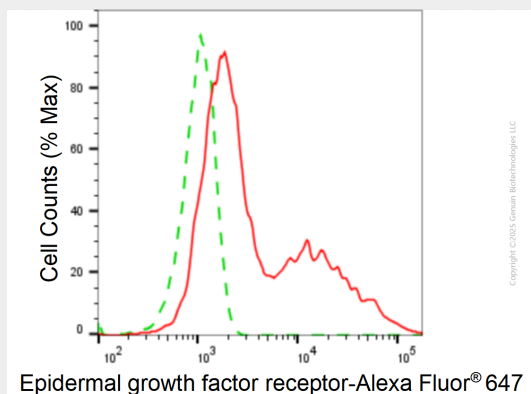
## KD-Validated Anti-Epidermal Growth Factor Receptor Mouse Monoclonal Antibody - Images



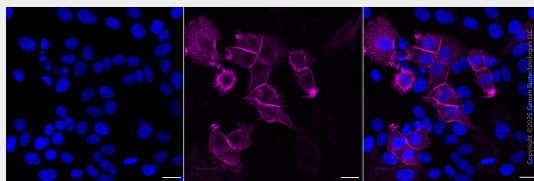
Western blotting analysis using anti-epidermal growth factor receptor antibody (Cat#AGI1920). Total cell lysates (30 µg) from various cell lines were loaded and separated by SDS-PAGE. The blot was incubated with anti-epidermal growth factor receptor antibody (Cat#AGI1920, 1:5,000) and HRP-conjugated goat anti-mouse secondary antibody respectively.



Western blotting analysis using anti-epidermal growth factor receptor antibody (Cat#AGI1920). 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#AGI1920, 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 anti-epidermal growth factor receptor antibody (Cat#AGI1920, 1:2,000). Green, isotype control; red, epidermal growth factor receptor.



Immunocytochemical staining of HepG2 cells with anti-Epidermal growth factor receptor antibody (Cat#AGI1920, 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□Medium. Scale bar, 20 μm.