

# Anti-ERBB1 / EGFR / HER1 Reference Antibody (Cetuximab-MMAE)

Recombinant Antibody  
Catalog # APR10111

## Product Information

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<b>Application</b>	FC, Kinetics, Animal Model
<b>Primary Accession</b>	<a href="#">P00533</a>
<b>Reactivity</b>	Human, Mouse
<b>Clonality</b>	Monoclonal
<b>Isotype</b>	IgG1
<b>Calculated MW</b>	134277

## Additional Information

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<b>Target/Specificity</b>	ERBB1 / EGFR / HER1
<b>Endotoxin Conjugation</b>	MMAE
<b>Expression system</b>	CHO Cell
<b>Format</b>	Purified monoclonal antibody supplied in PBS, pH6.0, without preservative. This antibody is purified through a protein A column.

## Protein Information

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<b>Name</b>	EGFR ( <a href="#">HGNC:3236</a> )
<b>Synonyms</b>	ERBB, ERBB1, HER1
<b>Function</b>	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="#">10805725</a> , PubMed: <a href="#">27153536</a> , PubMed: <a href="#">2790960</a> , PubMed: <a href="#">35538033</a> ). Known ligands include EGF, TGFA/TGF- alpha, AREG, epigen/EPGN, BTC/betacellulin, epiregulin/EREG and HBEGF/heparin-binding EGF (PubMed: <a href="#">12297049</a> , PubMed: <a href="#">15611079</a> , PubMed: <a href="#">17909029</a> , PubMed: <a href="#">20837704</a> , PubMed: <a href="#">27153536</a> , PubMed: <a href="#">2790960</a> , PubMed: <a href="#">7679104</a> , PubMed: <a href="#">8144591</a> , PubMed: <a href="#">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="#">27153536</a> ). May also activate the NF-kappa-B signaling cascade (PubMed: <a href="#">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:[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).

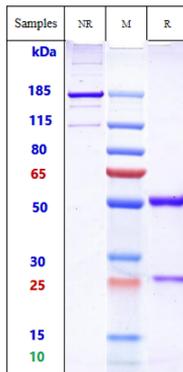
### Cellular Location

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](#))

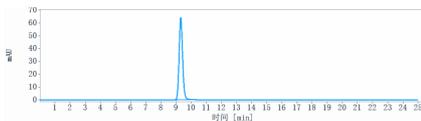
### Tissue Location

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

### Images



Anti-ERBB1 / EGFR / HER1 Reference Antibody (Cetuximab-MMAE) on SDS-PAGE under reducing (R) condition. The gel was stained with Coomassie Blue. The purity of the protein is greater than 90%



The purity of Anti-ERBB1 / EGFR / HER1 Reference Antibody (Cetuximab-MMAE) is more than 95% ,determined by SEC-HPLC.

Image not found : 202311/AP90110-3.jpg

Immobilized human EGFR His at 2  $\mu\text{g}/\text{mL}$  can bind Anti-ERBB1 / EGFR / HER1 Reference Antibody (Cetuximab-MMAE),  $\text{EC}_{50}=3.73 \mu\text{g}/\text{mL}$

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