

**Anti-ERBB1 / EGFR / HER1 Reference Antibody (necitumumab)
Recombinant Antibody
Catalog # APR10033****Specification**

Anti-ERBB1 / EGFR / HER1 Reference Antibody (necitumumab) - Product Information

Application	FC, E, FTA
Primary Accession	P00533
Reactivity	Cynomolgus, Human, Mouse
Clonality	Monoclonal
Isotype	IgG1
Calculated MW	144.78 KDa

Anti-ERBB1 / EGFR / HER1 Reference Antibody (necitumumab) - Additional Information**Target/Specificity**
ERBB1 / EGFR / HER1**Endotoxin**
< 0.001EU/ µg, determined by LAL method.**Conjugation**
Unconjugated**Expression system**
CHO Cell**Format**
Purified monoclonal antibody supplied in PBS, pH6.0, without preservative. This antibody is purified through a protein A column.**Anti-ERBB1 / EGFR / HER1 Reference Antibody (necitumumab) - 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](http://www.uniprot.org/citations/10805725), PubMed: [27153536](http://www.uniprot.org/citations/27153536), PubMed: [2790960](http://www.uniprot.org/citations/2790960), PubMed: [35538033](http://www.uniprot.org/citations/35538033)). Known ligands include EGF, TGFA/TGF- alpha, AREG, epigen/EPGN, BTC/betacellulin, epiregulin/EREG and HBEGF/heparin-binding EGF (PubMed: [12297049](http://www.uniprot.org/citations/12297049), PubMed: [15611079](http://www.uniprot.org/citations/15611079), PubMed: [17909029](http://www.uniprot.org/citations/17909029))

target="_blank">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.

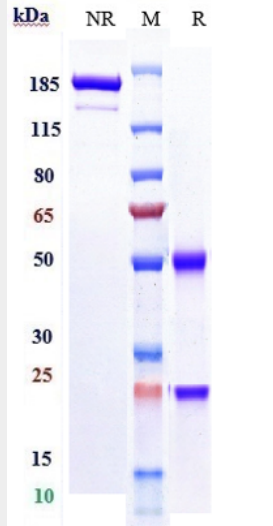
Anti-ERBB1 / EGFR / HER1 Reference Antibody (necitumumab) - Protocols

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

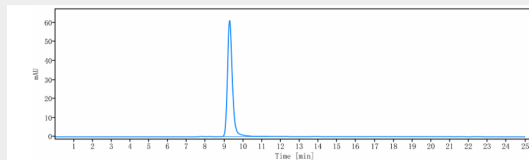
- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

Anti-ERBB1 / EGFR / HER1 Reference Antibody (necitumumab) - Images

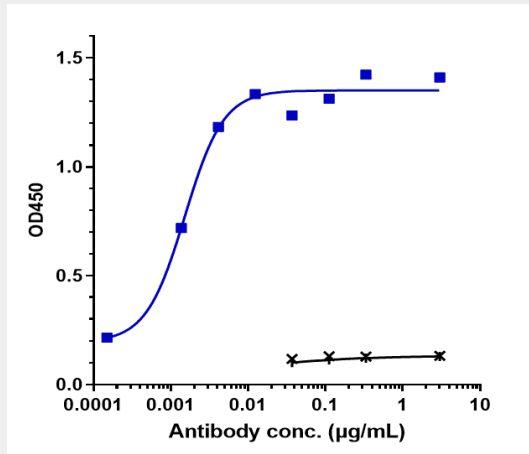




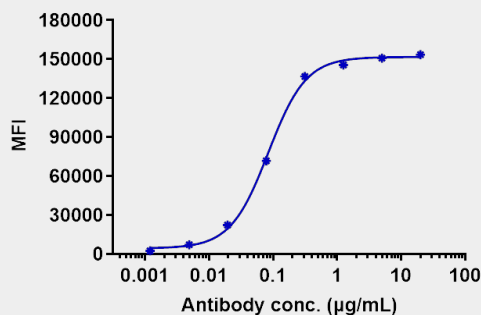
Anti-ERBB1 / EGFR / HER1 Reference Antibody (necitumumab) on SDS-PAGE under reducing (R) condition. The gel was stained with Coomassie Blue. The purity of the protein is greater than 95%



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



Immobilized human EGFR His at 2 µg/mL can bind Anti-ERBB1 / EGFR / HER1 Reference Antibody (necitumumab) $EC_{50}=0.001519$ µg/mL.



Human EGFR CHO-K cells were stained with Anti-ERBB1 / EGFR / HER1 Reference Antibody (necitumumab) and negative control protein respectively, washed and then followed by PE and analyzed with FACS, EC82=0.08413 $\mu\text{g/mL}$