

# EGFR / HER1 / ErbB1 Neutralizing Antibody



Catalog Number: 10001-RE10

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General Information	
<b>Immunogen:</b>	Recombinant Human EGFR / HER1 / ErbB1 Protein (Catalog#10001-H08H)
<b>Clone ID:</b>	RE10
<b>Ig Type:</b>	Rabbit IgG
<b>Applications:</b>	Neutralization
<b>Specificity:</b>	Human EGFR / HER1 / ErbB1
<b>Formulation:</b>	0.2 µm filtered solution in Histidine and Arginine buffer containing 120mM NaCl, 0.02% Tween 80, pH6.0
<b>Storage:</b>	< -20°C

## Preparation

This antibody was obtained from a rabbit immunized with purified, recombinant Human EGFR / HER1 / ErbB1 (rh EGFR / HER1 / ErbB1; Catalog#10001-H08H; NP\_005219; Met1-Ser645) and was produced using recombinant antibody technology.

## Specificity

Human EGFR / HER1 / ErbB1

**Has cross-reactivity** with Mouse EGFR (Catalog#951091-M08H), Rat EGFR (Catalog#80100-R08H) and Rhesus EGFR (Catalog#90317-K08H) in ELISA assay

## Storage

This antibody can be stored at 2°C-8°C for one month without detectable loss of activity. Antibody products are stable for twelve months from date of receipt when stored at -20°C to -80°C. **Preservative-Free.**

Sodium azide is recommended to avoid contamination (final concentration 0.05%-0.1%). It is toxic to cells and should be disposed of properly. **Avoid repeated freeze-thaw cycles.**

## Background

As a member of the epidermal growth factor receptor (EGFR) family, EGFR protein is type I transmembrane glycoprotein that binds a subset of EGF family ligands including EGF, amphiregulin, TGF-α, betacellulin, etc. EGFR protein plays a crucial role in signaling pathway in the regulation of cell proliferation, survival and differentiation. Binding of a ligand induces EGFR protein homo- or heterodimerization, the subsequent tyrosine autophosphorylation and initiates various down stream pathways (MAPK, PI3K/PKB and STAT). In addition, EGFR signaling also has been shown to exert action on carcinogenesis and disease progression, and thus EGFR protein is proposed as a target for cancer therapy currently.

## Reference

Schlessinger, J. (2000) Cell signaling by receptor tyrosine kinases. *Cell* 103 (2): 211-25.  
 Giaccone, G. (2005) HER1/EGFR-targeted agents: predicting the future for patients with unpredictable outcomes to therapy. *Ann. Oncol.* 16 (4): 538-48.  
 Yarden, Y., *et al.* (2001) Untangling the ErbB signalling network. *Nat. Rev. Mol. Cell. Biol.* 2 (2): 127-37.

Character	Method	Result
<b>Specificity</b>	ELISA	Human EGFR (Catalog#10001-H08B)
<b>Antibody concentration</b>	UV	> 1 mg/mL
<b>Aggregation</b>	SEC-HPLC	< 5% aggregation
<b>Purity</b>	SDS-PAGE	> 95%
<b>Endotoxin</b>	LAL gel clotting	< 3 EU/mg

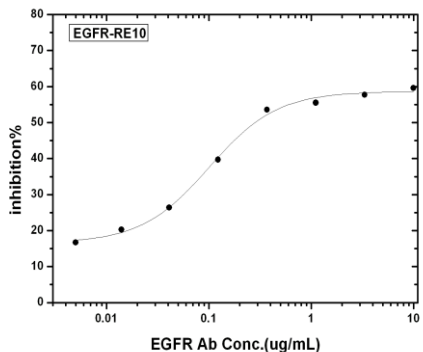
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## Applications

**Block** – In a functional ELISA which immobilized the recombinant Human EGF (Catalog#10605-H01H) at 2 µg/mL (100 µl/well), 20 µg/mL of the Human EGFR antibody (Catalog#10001-RE10) can blocked > 50% the binding of recombinant receptor EGFR (Catalog#10001-H08H) at 0.08 µg/mL

**Neutralization** – The neutralization activity of EGFR Neutralizing Antibody is Measured by its ability to neutralize autocrine EGF induced proliferation in the human breast cancer MDA-MB-468 cell line. The Neutralization titer (IC50) is typically 0.05-0.2 µg/mL for 5000 cells/well.



**Cell Proliferation Induced by Autocrine EGF was Neutralized by Human EGFR Antibody.** Autocrine EGF stimulates proliferation in the human breast cancer MDA-MB-468 cell line. Proliferation elicited by Autocrine EGF is neutralized by increasing concentrations of Human EGFR Monoclonal Antibody (Catalog#10001-RE10). The IC50 is typically 0.05-0.2 µg/mL.