# EGFR / HER1 / ErbB1 Neutralizing Antibody

**Catalog Number:** 10001-RE10

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## General Information

<table>
<thead>
<tr>
<th>Character</th>
<th>Method</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>Specificity</td>
<td>ELISA</td>
<td>Human EGFR (Catalog#10001-H08H)</td>
</tr>
<tr>
<td>Antibody concentration</td>
<td>UV</td>
<td>&gt; 1 mg/mL</td>
</tr>
<tr>
<td>Aggregation</td>
<td>SEC-HPLC</td>
<td>&lt; 5% aggregation</td>
</tr>
<tr>
<td>Purity</td>
<td>SDS-PAGE</td>
<td>&gt; 95%</td>
</tr>
<tr>
<td>Endotoxin</td>
<td>LAL gel clotting</td>
<td>&lt; 3 EU/mg</td>
</tr>
</tbody>
</table>

## 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


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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 block > 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.

![Graph showing inhibition of EGFR Ab Concentration against EGFR-RE10](image)

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.