



# Mouse Anti-Human EGFR Monoclonal antibody, clone 225 (CABT-L4513)

This product is for research use only and is not intended for diagnostic use.

## PRODUCT INFORMATION

### Product Overview

The 225 monoclonal antibody reacts with an epitope on the extracellular domain of human EGFR belongs to the ErbB family of receptors. EGFR signaling is activated upon binding one of its ligands including epidermal growth factor (EGF), transforming growth factor  $\alpha$  (TGF  $\alpha$ ), Amphiregulin, and heparin binding EGF (HB-EGF). Upon activation, EGFR transitions from an inactive monomeric form to an active homodimer. This initiates several downstream signal transduction cascades including the MAPK, Akt and JNK pathways, leading to DNA synthesis and cell proliferation. EGFR overexpression or constitutive activation are associated with many cancers. For this reason, anti-EGFR monoclonal antibody mediated immunotherapies are currently being explored as cancer treatments. The 225 antibody has been reported to neutralize EGFR signaling.

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|---------------------------|------------------------------------------------------------------------|
| <b>Target</b>             | Human EGFR                                                             |
| <b>Immunogen</b>          | Purified EGFR from A431 cells                                          |
| <b>Isotype</b>            | IgG1                                                                   |
| <b>Source/Host</b>        | Mouse                                                                  |
| <b>Species Reactivity</b> | Human                                                                  |
| <b>Clone</b>              | 225                                                                    |
| <b>Purification</b>       | Protein G purified.<br>Purity>95%. Determined by SDS-PAGE              |
| <b>Conjugate</b>          | Functional Grade                                                       |
| <b>Applications</b>       | in vitro EGFR blockade, in vivo EGFR blockade in xenografts, WB, FuncS |

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|-------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Molecular Weight</b> | 150 kDa                                                                                                                                                                                                           |
| <b>Format</b>           | 0.2 $\mu$ M filtered liquid. Purified from tissue culture supernatant in an animal free facility                                                                                                                  |
| <b>Concentration</b>    | Lot specific                                                                                                                                                                                                      |
| <b>Size</b>             | 5 mg                                                                                                                                                                                                              |
| <b>Buffer</b>           | PBS, pH 7.0. Contains no stabilizers or preservatives. [low endotoxin azide-free]<br><br>Endotoxin level: <2EU/mg (<0.002EU/ $\mu$ g). Determined by LAL gel clotting assay<br>Related dilution buffer: CABT-LB04 |
| <b>Preservative</b>     | None                                                                                                                                                                                                              |
| <b>Storage</b>          | The antibody solution should be stored undiluted at 4°C, and protected from prolonged exposure to light. Do not freeze.                                                                                           |
| <b>Ship</b>             | Wet ice                                                                                                                                                                                                           |

## BACKGROUND

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| <b>Introduction</b> | The protein encoded by this gene is a transmembrane glycoprotein that is a member of the protein kinase superfamily. This protein is a receptor for members of the epidermal growth factor family. EGFR is a cell surface protein that binds to epidermal growth factor. Binding of the protein to a ligand induces receptor dimerization and tyrosine autophosphorylation and leads to cell proliferation. Mutations in this gene are associated with lung cancer. Multiple alternatively spliced transcript variants that encode different protein isoforms have been found for this gene. |
| <b>Keywords</b>     | EGFR;epidermal growth factor<br>receptor;ERBB;HER1;mENA;ERBB1;PIG61;OTTHUMP00000159661;OTTHUMP00000159662;OTTHUMP00000159663                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |

## GENE INFORMATION

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|------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Official Symbol</b> | epidermal growth factor receptor                                                                                                                                                                                                                               |
| <b>Synonyms</b>        | EGFR; epidermal growth factor receptor; ERBB; HER1; mENA; ERBB1; PIG61; OTTHUMP00000159661; OTTHUMP00000159662; OTTHUMP00000159663                                                                                                                             |
| <b>References</b>      | Bessette, D. C., et al. (2015). "Using the MCF10A/MCF10CA1a Breast Cancer Progression Cell Line Model to Investigate the Effect of Active, Mutant Forms of EGFR in Breast Cancer Development and Treatment Using Gefitinib." PLoS One 10(5): e0125232. PubMed; |