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|--------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Product name:</b>     | Phospho-EGFR (Y845)                                                                                                                                                                                                                    |
| <b>Cat number:</b>       | ABP-0023                                                                                                                                                                                                                               |
| <b>Conjugate:</b>        | Unconjugated                                                                                                                                                                                                                           |
| <b>Size:</b>             | 100 ug                                                                                                                                                                                                                                 |
| <b>Clone:</b>            | Poly                                                                                                                                                                                                                                   |
| <b>Concentration:</b>    | 1mg/ml                                                                                                                                                                                                                                 |
| <b>Host:</b>             | Rb                                                                                                                                                                                                                                     |
| <b>Isotype:</b>          | IgG                                                                                                                                                                                                                                    |
| <b>Reactivity:</b>       | Hu                                                                                                                                                                                                                                     |
| <b>Applications:</b>     | WB: 1:1000                                                                                                                                                                                                                             |
| <b>Molecular Weight:</b> | 175 kDa                                                                                                                                                                                                                                |
| <b>Purification:</b>     | Polyclonal antibodies are produced by immunizing animals with a synthetic phosphopeptide corresponding to residues surrounding Tyr845 of human EGF receptor. Antibodies are purified by protein A and peptide affinity chromatography. |
| <b>Form:</b>             | liquid                                                                                                                                                                                                                                 |
| <b>Buffer:</b>           | PBS with 0.02% sodium azide, 50% glycerol, pH7.3.                                                                                                                                                                                      |
| <b>Storage:</b>          | Store at -20°C. Avoid freeze / thaw cycles.                                                                                                                                                                                            |

**Background:**

The epidermal growth factor (EGF) receptor is a 170 kDa transmembrane tyrosine kinase and member of the HER/ErbB protein family. Ligand binding results in receptor dimerization, autophosphorylation, activation of downstream signaling and lysosomal degradation (1,2). Phosphorylation of EGF receptor (EGFR) at Tyr845 in the kinase domain is implicated in stabilizing the activation loop, maintaining the active state enzyme and providing a binding surface for substrate proteins (3,4). c-Src is involved in phosphorylation of EGFR at Tyr845 (5). The SH2 domain of PLC $\beta$  binds at phospho-Tyr992, resulting in activation of PLC $\beta$ -mediated downstream signaling (6). Phosphorylation of Tyr1045 creates a major docking site for c-Cbl, an adaptor protein that leads to receptor ubiquitination and degradation following EGFR activation (7,8). The GRB2 adaptor protein binds activated EGFR at phospho-Tyr1068 (9). A pair of phosphorylated residues (Tyr1148 and Tyr1173) provide a docking site for the SHC scaffold protein, with both sites involved in MAP kinase signaling activation (2). Phosphorylation of EGFR at specific serine and threonine residues attenuates EGFR kinase activity. EGFR carboxy terminal residues Ser1046 and Ser1047 are phosphorylated by CaM kinase II; mutations to either of these serines upregulate EGFR tyrosine autokinase activity (10). Phospho-EGF Receptor (Tyr845) Antibody detects endogenous levels of EGF receptor only when phosphorylated at tyrosine 845. The antibody may cross-react with other activated EGF receptor family members (e.g., ErbB2).