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#6937

EGF Receptor (D38B1) XP® Rabbit mAb (Magnetic Bead Conjugate)


Cell Signaling
TECHNOLOGY®

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For Research Use Only. Not for Use in Diagnostic Procedures.

| Applications: | Reactivity: | Sensitivity: | MW (kDa): | Source/Isotype: | UniProt ID: | Entrez-Gene Id: |
|---------------|-------------|--------------|-----------|-----------------|-------------|-----------------|
| IP | H M Mk | Endogenous | 175 | Rabbit IgG | #P00533 | 1956 |

| Product Usage Information | Application | Dilution |
|----------------------------------|---|----------|
| | Immunoprecipitation | 1:20 |
| Storage | Supplied in PBS Buffer (pH 7.2), 0.1% Tween® 20. Store at 4°C. Do not aliquot the antibodies. | |
| Specificity / Sensitivity | EGF Receptor (D38B1) XP® Rabbit mAb (Magnetic Bead Conjugate) detects endogenous levels of total EGF receptor protein. The antibody does not cross-react with other proteins of the ErbB family. | |
| Source / Purification | Monoclonal antibody is produced by immunizing animals with a fusion protein containing the cytoplasmic domain of human EGF receptor. | |
| Product Description | This Cell Signaling Technology antibody is immobilized by the covalent reaction of hydrazinonicotinamide-modified antibody with formylbenzamide-modified magnetic bead. EGF Receptor (D38B1) XP® Rabbit mAb (Magnetic Bead Conjugate) is useful for immunoprecipitation assays of EGF receptor protein. The unconjugated EGF Receptor (D38B1) XP® Rabbit mAb #4267 reacts with human, mouse, and monkey EGF Receptor protein. CST expects that EGF Receptor (D38B1) XP® Rabbit mAb (Magnetic Bead Conjugate) will also recognize EGF Receptor in these species. | |

MW (kDa)

175

Background

The epidermal growth factor (EGF) receptor is a transmembrane tyrosine kinase that belongs to the HER/ErbB protein family. Ligand binding results in receptor dimerization, autophosphorylation, activation of downstream signaling, internalization, 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 PLCγ binds at phospho-Tyr992, resulting in activation of PLCγ-mediated downstream signaling (6). Phosphorylation of EGFR at Tyr1045 creates a major docking site for the adaptor protein c-Cbl, leading 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 EGFR 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; mutation of either of these serines results in upregulated EGFR tyrosine autophosphorylation (10).

Background References

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- Emlet, D.R. et al. (1997) *J Biol Chem* 272, 4079-86.
- Levkowitz, G. et al. (1999) *Mol Cell* 4, 1029-40.
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- Rojas, M. et al. (1996) *J Biol Chem* 271, 27456-61.
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Species Reactivity

Species reactivity is determined by testing in at least one approved application (e.g., western blot).

Applications Key

IP: Immunoprecipitation

Cross-Reactivity Key

H: human **M:** mouse **R:** rat **Hm:** hamster **Mk:** monkey **Vir:** virus **Mi:** mink **C:** chicken **Dm:** D. melanogaster
X: Xenopus **Z:** zebrafish **B:** bovine **Dg:** dog **Pg:** pig **Sc:** S. cerevisiae **Ce:** C. elegans **Hr:** horse
GP: Guinea Pig **Rab:** rabbit **All:** all species expected

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