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#5108

EGF Receptor (D38B1) XP® Rabbit mAb (Alexa Fluor® 555 Conjugate)



Cell Signaling
TECHNOLOGY®

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

Applications: IF-IC	Reactivity: H M Mk	Sensitivity: Endogenous	Source/Isotype: Rabbit IgG	UniProt ID: #P00533	Entrez-Gene Id: 1956
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Product Usage Information	Application Immunofluorescence (Immunocytochemistry)	Dilution 1:50
Storage	Supplied in PBS (pH 7.2), less than 0.1% sodium azide and 2 mg/ml BSA. Store at 4°C. Do not aliquot the antibody. Protect from light. Do not freeze.	
Specificity / Sensitivity	EGF Receptor (D38B1) XP® Rabbit mAb (Alexa Fluor® 555 Conjugate) detects endogenous levels of total EGF receptor protein. The antibody does not cross-react with other proteins of the ErbB family. Species cross-reactivity by IF-IC is human only.	
Source / Purification	Monoclonal antibody is produced by immunizing animals with a fusion protein containing the cytoplasmic domain of human EGF receptor. The antibody was conjugated to Alexa Fluor® 555 under optimal conditions with an F/P ratio of 2-6.	
Product Description	This Cell Signaling Technology® antibody is conjugated to Alexa Fluor® 555 fluorescent dye and tested in-house for immunofluorescent analysis in human cells. The antibody is expected to exhibit the same species cross-reactivity as the unconjugated EGF Receptor (D38B1) XP® Rabbit mAb #4267.	
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	<ol style="list-style-type: none"> 1. Hackel, P.O. et al. (1999) <i>Curr Opin Cell Biol</i> 11, 184-9. 2. Zwick, E. et al. (1999) <i>Trends Pharmacol Sci</i> 20, 408-12. 3. Cooper, J.A. and Howell, B. (1993) <i>Cell</i> 73, 1051-4. 4. Hubbard, S.R. et al. (1994) <i>Nature</i> 372, 746-54. 5. Biscardi, J.S. et al. (1999) <i>J Biol Chem</i> 274, 8335-43. 6. Emlet, D.R. et al. (1997) <i>J Biol Chem</i> 272, 4079-86. 7. Levkowitz, G. et al. (1999) <i>Mol Cell</i> 4, 1029-40. 8. Ettenberg, S.A. et al. (1999) <i>Oncogene</i> 18, 1855-66. 9. Rojas, M. et al. (1996) <i>J Biol Chem</i> 271, 27456-61. 10. Feinmesser, R.L. et al. (1999) <i>J Biol Chem</i> 274, 16168-73. 	

Species Reactivity	Species reactivity is determined by testing in at least one approved application (e.g., western blot).
Applications Key	IF-IC: Immunofluorescence (Immunocytochemistry)
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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