Revision 8

#4267 Store at -20C

EGF Receptor (D38B1) XP® Rabbit mAb

Cell Signaling TECHNOLOGY®

Orders: 877-616-CELL (2355) orders@cellsignal.com

Support: 877-678-TECH (8324)

Web: info@cellsignal.com cellsignal.com

3 Trask Lane | Danvers | Massachusetts | 01923 | USA

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

Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
WB, W-S, IP, IHC-Bond, IHC-P, IF-IC, FC-FP	H M Mk	Endogenous	175	Rabbit IgG	#P00533	1956

Product Usage Information

Application	Dilution
Western Blotting	1:1000
Simple Western™	1:10 - 1:50
Immunoprecipitation	1:100
IHC Leica Bond	1:50
Immunohistochemistry (Paraffin)	1:50
Immunofluorescence (Immunocytochemistry)	1:50 - 1:200
Flow Cytometry (Fixed/Permeabilized)	1:50 - 1:200

Storage

Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA, 50% glycerol and less than 0.02% sodium azide. Store at –20°C. Do not aliquot the antibody.

For a carrier-free (BSA and azide free) version of this product see product #26038.

Specificity / Sensitivity

EGF Receptor (D38B1) XP® Rabbit mAb detects endogenous levels of total EGF receptor protein. The antibody does not cross-react with other proteins of the ErbB family. Species cross-reactivity for IHC-P, IHC-BOND, and 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.

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

1. Hackel, P.O. et al. (1999) *Curr Opin Cell Biol* 11, 184-9.
2. Zwick, E. et al. (1999) *Trends Pharmacol Sci* 20, 408-12.
3. Cooper, J.A. and Howell, B. (1993) *Cell* 73, 1051-4.
4. Hubbard, S.R. et al. (1994) *Nature* 372, 746-54.
5. Biscardi, J.S. et al. (1999) *J Biol Chem* 274, 8335-43.
6. Emlet, D.R. et al. (1997) *J Biol Chem* 272, 4079-86.
7. Levkowitz, G. et al. (1999) *Mol Cell* 4, 1029-40.
8. Ettenberg, S.A. et al. (1999) *Oncogene* 18, 1855-66.
9. Rojas, M. et al. (1996) *J Biol Chem* 271, 27456-61.
10. Feinmesser, R.L. et al. (1999) *J Biol Chem* 274, 16168-73.

Species Reactivity

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

Western Blot Buffer

IMPORTANT: For western blots, incubate membrane with diluted primary antibody in 5% w/v BSA, 1X TBS, 0.1% Tween® 20 at 4°C with gentle shaking, overnight.

Applications Key

WB: Western Blotting **W-S:** Simple Western™ **IP:** Immunoprecipitation **IHC-Bond:** IHC Leica Bond
IHC-P: Immunohistochemistry (Paraffin) **IF-IC:** Immunofluorescence (Immunocytochemistry)
FC-FP: Flow Cytometry (Fixed/Permeabilized)

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

Trademarks and Patents

Limited Uses