

Store at -20C
#8083

EGF Receptor (EGFR1) Mouse mAb (Sephacore® 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	Endogenous	175	Mouse IgG2b	#P00533	1956

Product Usage Information	Application	Dilution
	Immunoprecipitation	1:20
Storage	Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA, 50% glycerol. Store at -20°C. Do not aliquot the antibodies.	
Specificity / Sensitivity	EGF Receptor (EGFR1) Mouse mAb (IP Specific) (Sephacore® Bead Conjugate) specifically immunoprecipitates endogenous EGFR1 protein from various cell lysates. This antibody does not cross-react with other EGF receptor family members.	
Source / Purification	Monoclonal antibody is produced by immunizing animals with a recombinant protein corresponding to the extracellular domain of human EGFR1 protein.	
Product Description	This Cell Signaling Technology antibody is immobilized via covalent binding of primary amino groups to N-hydroxysuccinimide (NHS)-activated Sephacore® beads. EGF Receptor (EGFR1) Mouse mAb (IP Specific) (Sephacore® Bead Conjugate) is useful for immunoprecipitation assays. The antibody is expected to exhibit the same species cross-reactivity as the unconjugated EGF Receptor (EGFR1) Mouse mAb (IP Specific) #2256.	

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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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).

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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