PRODUCT INFORMATION

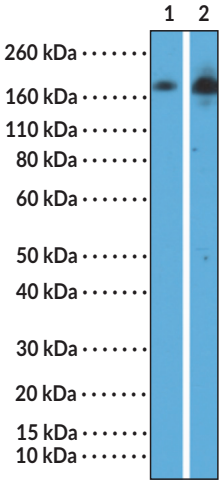
EGFR (Phospho-Tyr^{1068}) Rabbit Monoclonal Antibody (Clone RM443)

Item No. 35901

Overview and Properties

Contents:	This vial contains 100 µl of protein A-affinity purified monoclonal antibody.
Synonyms:	Epidermal Growth Factor Receptor, ErbB-1, HER1
Immunogen:	A phospho-peptide corresponding to human phospho-EGFR
Cross Reactivity:	(+) EGFR (Phospho-Tyr^{1068}); (-) EGFR without phosphorylation at Tyr^{1068}
Species Reactivity:	(+) Human
Form:	Liquid
Storage:	-20°C (as supplied)
Stability:	≥1 year
Storage Buffer:	PBS with 50% glycerol, 1% BSA, and 0.09% sodium azide
Clone:	RM443
Host:	Rabbit
Isotype:	IgG
Applications:	Western blot (WB); the recommended starting dilution is 1:1,000 -1:4,000. Other applications were not tested, therefore optimal working concentration/dilution should be determined empirically.

Image



Lane 1: A431 cells nontreated
Lane 2: A431 cells treated

WB of A431 cells nontreated and treated with EGF using EGFR (Phospho-Tyr^{1068}) Rabbit Monoclonal Antibody at a dilution of 1:1,000.

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Description

Epidermal growth factor receptor (EGFR), also known as HER1 and ErbB-1, is a cell surface receptor and member of the EGF family of receptor tyrosine kinases with roles in cell proliferation, differentiation, and survival.[1,2] It is a transmembrane receptor composed of an intracellular tyrosine kinase domain, a transmembrane lipophilic segment, and an extracellular domain that is expressed in epithelial, mesenchymal, and neuronal tissues.[1-3] Under unstimulated conditions, EGFR is an auto-inhibited monomer in the plasma membrane.[1] Upon canonical ligand binding, EGFR undergoes homodimerization or heterodimerization with HER2, HER3, or HER4, which induces a conformational change in the cytoplasmic domain that facilitates autophosphorylation and intracellular signaling. EGFR contains five C-terminal autophosphorylation sites, namely tyrosine 1068 (Tyr^{1068}), Tyr^{1148}, Tyr^{1173}, Tyr^{1086}, and Tyr^{992}.[4] EGFR (phospho-Tyr^{1068}) is associated with prolonged progression-free survival in patients with non-small cell lung cancer (NSCLC). Cayman's EGFR (Phospho-Tyr^{1068}) Rabbit Monoclonal Antibody can be used for Western blot (WB).

References

1. Sigismund, S., Avanzato, D., and Lanzetti, L. Emerging functions of the EGFR in cancer. *Mol. Oncol.* **12(1)**, 3-20 (2018).
2. Herbst, R.S. Review of epidermal growth factor receptor biology. *Int. J. Radiat. Oncol. Biol. Phys.* **59(2 Suppl)**, 21-26 (2004).
3. Yano, S., Kondo, K., Yamaguchi, M., *et al.* Distribution and function of EGFR in human tissue and the effect of EGFR tyrosine kinase inhibition. *Anticancer Res.* **23(5A)**, 3639-3650 (2003).
4. Wang, F., Wang, S., Wang, Z., *et al.* Phosphorylated EGFR expression may predict outcome of EGFR-TKIs therapy for the advanced NSCLC patients with wild-type EGFR. *J. Exp. Clin. Cancer Res.* **31(1)**, 65 (2012).

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