

PRODUCT INFORMATION



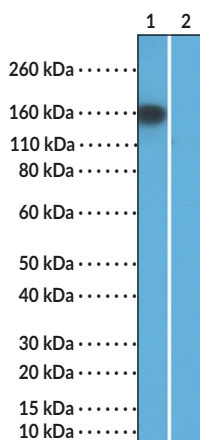
EGFR^{L858R} Rabbit Monoclonal Antibody (RM380)

Item No. 32327

Overview and Properties

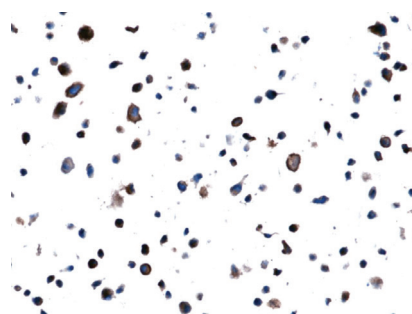
Contents:	This vial contains 100 µl of protein A-affinity purified monoclonal antibody.
Synonyms:	Epidermal Growth Factor Receptor, ErbB-1, HER1
Immunogen:	Peptide corresponding to human EGFR ^{L858R}
Cross Reactivity:	(+) EGFR ^{L858R}
Species Reactivity:	(+) Human
Form:	Liquid
Storage:	-20°C (as supplied)
Stability:	≥1 year
Storage Buffer:	PBS with 50% glycerol, 1% BSA, and 0.09% sodium azide
Clone:	RM380
Host:	Rabbit
Isotype:	IgG
Applications:	Immunohistochemistry (IHC) and Western blot (WB); the recommended starting dilution for IHC is 1:100-1:200 and 1:1,000-1:2,000 for WB. Other applications were not tested, therefore optimal working concentration/dilution should be determined empirically.

Images

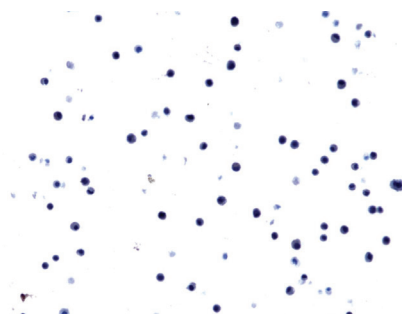


Lane 1: H1975 cell lysate
Lane 2: H1650 cell lysate

WB of H1975 and H1650 cell lysates using EGFR^{L858R} Rabbit Monoclonal Antibody (RM380) at a dilution of 1:1,000.



Immunohistochemical staining of formalin-fixed and paraffin-embedded H1975 cells using EGFR^{L858R} Rabbit Monoclonal Antibody (RM380) at a dilution of 1:100.



Immunohistochemical staining of formalin-fixed and paraffin-embedded H1650 cells using EGFR^{L858R} Rabbit Monoclonal Antibody (RM380) at a dilution of 1:100.

WARNING
THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA
This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the [complete](#) Safety Data Sheet, which has been sent via email to your institution.

WARRANTY AND LIMITATION OF REMEDY
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Description

Epidermal growth factor receptor (EGFR), also known as HER1 and ErbB1, 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 170 kDa 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. The exon 19 in-frame deletion mutant EGFR^{L858R} is found, often in conjunction with additional EGFR mutations, in non-small cell lung cancers (NSCLC) and is associated with increased susceptibility to tyrosine kinase inhibition and cell death.^{4,5} Cayman's EGFR^{L858R} Rabbit Monoclonal Antibody (RM380) can be used for immunohistochemistry (IHC) and Western blot (WB) applications.

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. Jia, Y., Yun, C.H., Park, E., *et al.* Overcoming EGFR(T790M) and EGFR(C797S) resistance with mutant-selective allosteric inhibitors. *Nature* **534(7605)**, 129-132 (2016).
5. Kobayashi, S., Canepa, H.M., Bailey, A.S., *et al.* Compound EGFR mutations and response to EGFR tyrosine kinase inhibitors. *J. Thorac. Oncol.* **8(1)**, 45-51 (2013).

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