

PRODUCT INFORMATION



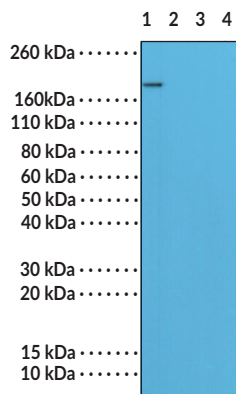
HER2/ErbB2 (C-Term) Monoclonal Antibody (Clone RM228)

Item No. 32191

Overview and Properties

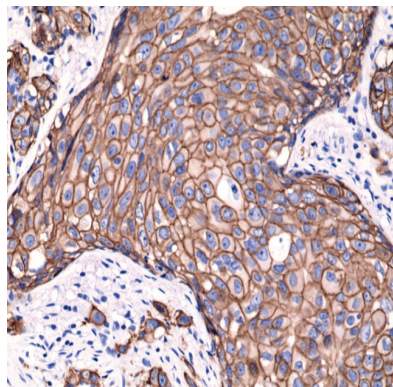
Contents:	This vial contains 100 µl or 1 ml of protein A-affinity purified monoclonal antibody.
Synonyms:	CD340, Erb-B2 Receptor Tyrosine Kinase 2, Human Epidermal Growth Factor Receptor 2, Neu, Receptor Tyrosine-Protein Kinase ErbB-2
Immunogen:	Peptide from the C-terminal region of human HER2/ErbB2
Cross Reactivity:	(+) HER2/ErbB2
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:	RM228
Host:	Rabbit
Isotype:	IgG
Applications:	Immunohistochemistry (IHC) and Western blot (WB); the recommended starting dilution is 1:100-1:400 for IHC and 1:1,000 for WB. Other applications were not tested, therefore optimal working concentration/dilution should be determined empirically.

Images



Lane 1: MCF-7 cell lysates
Lane 2: PC3 cell lysates
Lane 3: Jurkat cell lysates
Lane 4: A375 cell lysates

WB of MCF-7, PC3, Jurkat, and A375 cell lysates using HER2/ErbB2 (C-Term) Monoclonal Antibody (Clone RM228).



Immunohistochemical staining of FFPE human breast cancer tissue sections using HER2/ErbB2 (C-Term) Monoclonal Antibody (Clone RM228).

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
Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

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Description

Human epidermal growth factor receptor 2 (HER2), also known as ErbB2 and Neu, is a cell surface receptor and member of the EGF family of receptor tyrosine kinases that is encoded by *ERBB2* in humans.¹ It is a transmembrane receptor composed of a C-terminal intracellular tyrosine kinase domain, a transmembrane lipophilic segment, and an N-terminal extracellular domain, that is expressed at low levels in various epithelial tissues, as well as breast, lung, kidney, ovary, placenta, and the gastrointestinal tract.² Unlike other EGF receptors, HER2 does not bind ligands or undergo a conformational change in its extracellular domain for activation. HER2 is activated upon heterodimerization with HER3 or HER4, which stabilizes ligand binding to HER3 and HER4, or homodimerization and enhances kinase-mediated activation of the MAPK and PI3K cellular signaling pathways.^{1,2} Truncated forms of HER2 with constitutive oncogenic activity can be generated by proteolytic cleavage of the extracellular domain.² *ERBB2* is overexpressed in 12 to 15% of breast cancer tumors and is associated with accelerated growth rate, increased rate of recurrence, and poor overall survival.² Various mutations in *ERBB2*, with or without gene amplification, have been found in prostate, colon, bladder, breast, lung, and colorectal tumors, as well as metastatic cutaneous squamous small cell carcinomas.^{3,4} Cayman's HER2/ErbB2 (C-Term) Monoclonal Antibody (Clone RM228) can be used for immunohistochemistry (IHC) and Western blot (WB) applications.

References

1. Gerson, J.N., Skiara, S., Denlinger, C.S., *et al.* Perspectives of HER2-targeting in gastric and esophageal cancer. *Expert Opin. Investig. Drugs* **26(5)**, 531-540 (2017).
2. Perrier, A., Gligorov, J., Lefèvre, G., *et al.* The extracellular domain of Her2 in serum as a biomarker of breast cancer. *Lab. Invest.* **98(6)**, 696-707 (2018).
3. Bose, R., Kavuri, S.M., Searleman, A.C., *et al.* Activating HER2 mutations in HER2 gene amplification negative breast cancer. *Cancer Discov.* **3(2)**, 224-237 (2013).
4. Connell, C.M. and Doherty, G.J. Activating HER2 mutations as emerging targets in multiple solid cancers. *ESMO Open* **2(5)**, e000279 (2017).

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