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**HER2/ErbB2 (29D8) Rabbit mAb (HRP Conjugate)****Cell Signaling**  
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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:
WB	H M	Endogenous	185	Rabbit IgG	#P04626	2064

Product Usage Information	Application	Dilution
	Western Blotting	1:1000
<b>Storage</b>	Supplied in 136 mM NaCl, 2.6 mM KCl, 12 mM sodium phosphate (pH 7.4) dibasic, 2 mg/ml BSA, and 50% glycerol. Store at -20°C. Do not aliquot the antibody.	
<b>Specificity / Sensitivity</b>	HER2/ErbB2 (29D8) Rabbit mAb (HRP Conjugate) detects endogenous levels of total ErbB2 protein. This antibody does not cross-react with related kinases.	
<b>Species predicted to react based on 100% sequence homology:</b>	Rat	
<b>Source / Purification</b>	Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues surrounding tyrosine 1248 of human ErbB2 protein.	
<b>Product Description</b>	This Cell Signaling Technology antibody is conjugated to the carbohydrate groups of horseradish peroxidase (HRP) via its amine groups. The HRP conjugated antibody is expected to exhibit the same species cross-reactivity as the unconjugated HER2/ErbB2 (29D8) Rabbit mAb #2165.	

MW (kDa)

185

<b>Background</b>	The ErbB2 (HER2) proto-oncogene encodes a 185 kDa transmembrane, receptor-like glycoprotein with intrinsic tyrosine kinase activity (1). While ErbB2 lacks an identified ligand, ErbB2 kinase activity can be activated in the absence of a ligand when overexpressed and through heteromeric associations with other ErbB family members (2). Amplification of the <i>ErbB2</i> gene and overexpression of its product are detected in almost 40% of human breast cancers (3). Binding of the c-Cbl ubiquitin ligase to ErbB2 at Tyr1112 leads to ErbB2 poly-ubiquitination and enhances degradation of this kinase (4). ErbB2 is a key therapeutic target in the treatment of breast cancer and other carcinomas and targeting the regulation of ErbB2 degradation by the c-Cbl-regulated proteolytic pathway is one potential therapeutic strategy. Phosphorylation of the kinase domain residue Tyr877 of ErbB2 (homologous to Tyr416 of pp60c-Src) may be involved in regulating ErbB2 biological activity. The major autophosphorylation sites in ErbB2 are Tyr1248 and Tyr1221/1222; phosphorylation of these sites couples ErbB2 to the Ras-Raf-MAP kinase signal transduction pathway (1,5).
<b>Background References</b>	<ol style="list-style-type: none"> <li>1. Muthuswamy, S.K. et al. (1999) <i>Mol Cell Biol</i> 19, 6845-57.</li> <li>2. Qian, X. et al. (1994) <i>Proc Natl Acad Sci USA</i> 91, 1500-4.</li> <li>3. Dittadi, R. and Gion, M. (2000) <i>J Natl Cancer Inst</i> 92, 1443-4.</li> <li>4. Klapper, L.N. et al. (2000) <i>Cancer Res</i> 60, 3384-8.</li> <li>5. Kwon, Y.K. et al. (1997) <i>J Neurosci</i> 17, 8293-9.</li> </ol>

<b>Species Reactivity</b>	Species reactivity is determined by testing in at least one approved application (e.g., western blot).
<b>Western Blot Buffer</b>	IMPORTANT: For western blots, incubate membrane with diluted primary antibody in 5% w/v nonfat dry milk, 1X TBS, 0.1% Tween® 20 at 4°C with gentle shaking, overnight.
<b>Applications Key</b>	<b>WB:</b> Western Blotting

**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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