Store at -20°C

#2244

Phospho-HER2/ErbB2 (Tyr1248)/EGFR (Tyr1173) Antibody

☑ 100 µl
(10 western blots)

Cell Signaling TECHNOLOGY®

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Entrez-Gene ID #2064
Swiss-Prot Acc. #P04626

Applications	Species Cross-Reactivity*	Molecular Wt.	Source
W Endogenous	H	185 kDa	Rabbit**

Storage: Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA and 50% glycerol. Store at –20°C. *Do not aliquot the antibody.*

***Species cross-reactivity is determined by western blot.**

****Anti-rabbit secondary antibodies must be used to detect this antibody.**

Recommended Antibody Dilutions:
Western blotting 1:1000

For application specific protocols please see the web page for this product at www.cellsignal.com.

Please visit www.cellsignal.com for a complete listing of recommended companion products.

Background: The ErbB2 (HER2) proto-oncogene encodes a transmembrane receptor-like glycoprotein of 185 kDa with intrinsic tyrosine kinase activity (1). ErbB2 does not have any known ligand. However, the kinase activity of ErbB2 can be activated without ligand if it is overexpressed and by heteromeric association with other members of the ErbB family (2). Amplification of the ErbB2 gene and overexpression of its product are detected in almost 40% of human breast cancers (3). Binding of the c-Cbl ubiquitin ligase to Tyr1112 of ErbB2 leads to poly-ubiquitination of ErbB2 and enhances its degradation (4). ErbB2 is one of the major targets for the treatment of breast cancer and other carcinomas. Direction of ErbB2 to the c-Cbl-regulated proteolytic pathway may have therapeutic potential.

Tyr877 of ErbB2 is homologous to Tyr416 of pp60c-Src, located in the kinase domain. Phosphorylation of this site may be involved in regulation of ErbB2 biological activity. Tyr1248 and Tyr1221/1222 are the major autophosphorylation sites in ErbB2. Phosphorylation of these sites couples ErbB2 to the Ras-Raf-MAP kinase signal transduction pathway (1,5).

Specificity/Sensitivity: Phospho-HER2/ErbB2 (Tyr1248)/EGFR (Tyr 1173) Antibody detects ErbB2 only when phosphorylated at tyrosine 1248 and EGFR only when phosphorylated at tyrosine 1173.

Source/Purification: Polyclonal antibodies are produced by immunizing animals with a synthetic phosphopeptide corresponding to residues surrounding Tyr1248 of human ErbB2. Antibodies are purified by protein A and peptide affinity chromatography.

Background References:

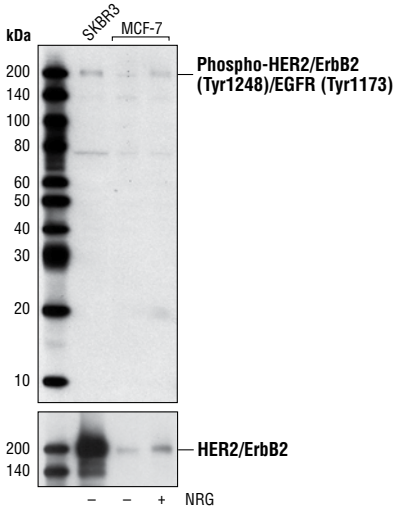
(1) Muthuswamy, S.K. et al. (1999) *Mol. Cell. Biol.* 19, 6845–6857.

(2) Qian, X. et al. (1994) *Proc. Natl. Acad. Sci. USA* 91, 1500–1504.

(3) Dittadi, R. and Gion, M. (2000) *J. Natl. Cancer Inst.* 92, 1443–1444.

(4) Klapper, L.N. et al. (2000) *Cancer Res.* 60, 3384–3388.

(5) Kwon, Y.K. et al. (1997) *J. Neurosci.* 17, 8293–8299.



Western blot analysis of extracts from untreated SKBR3 and MCF7 cells, untreated or treated with neuregulin (NRG), using Phospho-HER2/ErbB2 (Tyr1248)/EGFR (Tyr1173) Antibody (upper) and HER2/ErbB2 Antibody #2242 (lower).

IMPORTANT: For western blots, incubate membrane with diluted antibody in 5% w/v BSA, 1X TBS, 0.1% Tween-20 at 4°C with gentle shaking, overnight.

Applications Key: **W**—Western **IP**—Immunoprecipitation **IHC**—Immunohistochemistry **ChIP**—Chromatin Immunoprecipitation **IF**—Immunofluorescence **F**—Flow cytometry **E-P**—ELISA-Peptide
Species Cross-Reactivity Key: **H**—human **M**—mouse **R**—rat **Hm**—hamster **Mk**—monkey **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 **All**—all species expected Species enclosed in parentheses are predicted to react based on 100% homology.