

Store at
-20°C

Phospho-HER2/ErbB2 (panTyr) Matched Antibody Pair

#99159



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Entrez-Gene ID #2064
UniProt ID #P04626

For Research Use Only. Not for Use in Diagnostic Procedures.

Product Includes	Product #	Quantity	Isotype
HER2/ErbB2 (29D8) Rabbit mAb (BSA and Azide Free)	19783	100 µg	Rabbit IgG
Phospho-Tyrosine (9E9) Mouse mAb (BSA and Azide Free)	80941	100 µg	Mouse IgG2a kappa

Species Reactivity: H

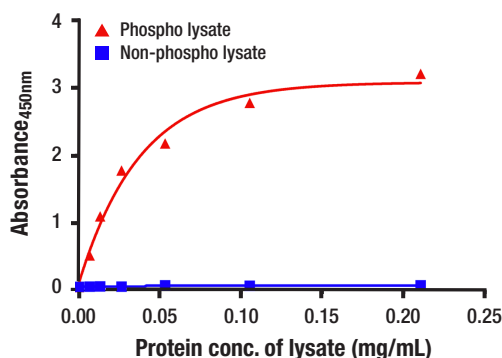
Description: The Phospho-HER2/ErbB2 (panTyr) Matched Antibody Pair is ideal for use with immunoassay technologies and high throughput ELISA platforms requiring antibody pairs with specialized or custom antibody labeling. Labels include fluorophores, lanthanides, biotin, and beads. Platforms requiring conjugated Matched Antibody Pairs include MSD, Quanterix Simoa, Alpha Technology (AlphaScreen, AlphaLISA, LANCE, HTRF), and Luminex.

Learn how Matched Antibody Pairs move your projects forward, faster at cst-science.com/matched-antibody-pairs.

Background: 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 *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 ErbB2 at Tyr112 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).

Specificity/Sensitivity: This kit detects proteins from the indicated species, as determined through in-house testing, but may also detect homologous proteins from other species.

Formulation: Supplied in 1X PBS (10 mM Na₂HPO₄, 3 mM KCl, 2 mM KH₂PO₄, and 140 mM NaCl (pH 7.8)). BSA and Azide Free.



Data using Phospho-HER2/ErbB2 (panTyr) Matched Antibody Pair #99159 are shown. The two antibodies function as a capture-target-detection sandwich (#19783 and #80941, respectively) to detect endogenous protein expression in positive and negative controls.

Storage: Store at -20°C. This product will freeze at -20°C so it is recommended to aliquot into single-use vials to avoid multiple freeze/thaw cycles. A slight precipitate may be present and can be dissolved by gently vortexing. This will not interfere with antibody performance.

Please visit cellsignal.com for validation data and a complete listing of recommended companion products.

Directions for Use: Matched Antibody Pairs include capture and detection antibodies to non-overlapping epitopes. Optimal dilutions/concentrations should be determined by the end user.

Background References:

- (1) Muthuswamy, S.K. et al. (1999) *Mol Cell Biol* 19, 6845-57.
- (2) Qian, X. et al. (1994) *Proc Natl Acad Sci USA* 91, 1500-4.
- (3) Dittadi, R. and Gion, M. (2000) *J Natl Cancer Inst* 92, 1443-4.
- (4) Klapper, L.N. et al. (2000) *Cancer Res* 60, 3384-8.
- (5) Kwon, Y.K. et al. (1997) *J Neurosci* 17, 8293-9.

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Applications: W—Western IP—Immunoprecipitation IHC—Immunohistochemistry CHIP—Chromatin Immunoprecipitation IF—Immunofluorescence F—Flow cytometry FC-FP—Flow cytometry-Fixed/Permeabilized FC-L—Flow cytometry-Live E-P—ELISA-Peptide
Species Cross-Reactivity: 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.