

HER2/ErbB2 Blocking Peptide

100 µg



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Description: This peptide is used to react with HER2/ ErbB2 (29D8) Rabbit mAb #2165 reactivity in peptide dot blot protocols.

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 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).

Quality Control: The quality of the peptide was evaluated by reversed-phase HPLC and by mass spectrometry. The peptide reacts with HER2/ErbB2 (29D8) Rabbit mAb #2165 signal in peptide dot blot.

Directions for Use: Use as a blocking reagent to evaluate the specificity of antibody reactivity in peptide dot blot protocols.

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.

Entrez Gene ID #2064
UniProt ID #P04626

Storage: Supplied in 20 mM potassium phosphate (pH 7.0), 50 mM NaCl, 0.1 mM EDTA, 1 mg/ml BSA, 5% glycerol and 1% DMSO. Store at -20°C.

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

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