HER3/ErbB3 (1B2) Rabbit mAb

**Background:**
HER3/ErbB3 is a member of the ErbB receptor protein tyrosine kinase family, but lacks tyrosine kinase activity. Tyrosine phosphorylation of ErbB3 depends on its association with other ErbB tyrosine kinases. Upon ligand binding, heterodimers form between ErbB3 and other ErbB proteins and ErbB3 is phosphorylated on tyrosine residues by the activated ErbB kinase (1, 2). There are at least 9 potential tyrosine phosphorylation sites in the carboxy terminal tail of ErbB3. These sites serve as consensus binding sites for signal transducing proteins, including Src family members, Grb2 and the p85 subunit of PI3 kinase, which mediate ErbB-downstream signaling (3). Both Tyr1222 and Tyr1289 of ErbB3 reside within a YXXM motif and participate in signaling to PI3 kinase (4).

ErbB3 is highly expressed in many cancer cells (5) and activation of ErbB3-PI3 kinase pathway is correlated with malignant phenotypes of adenocarcinomas (6). In tumor development, ErbB3 may function as an oncogenic unit together with other ErbB members, e.g. ErbB2 requires ErbB3 to drive breast tumor cell proliferation (7). Thus, prevention of the interaction of ErbB3 with other ErbB tyrosine kinases has become a novel anti-tumor strategy.

**Specificity/Sensitivity:**
HER/ErbB3 (1B2) Rabbit mAb detects endogenous levels of total HER3/ErbB3 proteins. This antibody does not cross-react with other ErbB family members.

**Source/Purification:**
Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Tyr867 of human ErbB3.

**Applications:**

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<tr>
<th>Applications</th>
<th>Species Cross-Reactivity*</th>
<th>Molecular Wt.</th>
<th>Isotype</th>
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<tbody>
<tr>
<td>W, IP</td>
<td>H, (M, R)</td>
<td>185 kDa</td>
<td>Rabbit IgG**</td>
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**Storage:**
Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA, 50% glycerol and less than 0.02% sodium azide. 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
Immunoprecipitation 1:50

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.

**Entrez-Gene ID:** # 2065
**UniProt ID:** # P21960

**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.

**Recommended Antibody Dilutions:**

Western blot analysis of MCF7 and T47D cell lysates using HER3/ErbB3 (1B2) Rabbit mAb.

**Background References:**

**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.