



# Mouse (monoclonal) Anti-Human *c-erbB-2* ( neu / HER-2 )

## PRODUCT ANALYSIS SHEET

<b>Catalog Number:</b>	AHO1011
<b>Lot Number:</b>	See product label
<b>Quantity:</b>	100 µg/0.1 mL
<b>Clone Number:</b>	e2-4001
<b>Isotype:</b>	IgG1
<b>Form of Antibody:</b>	Purified immunoglobulin in 10 mM phosphate buffered saline, pH 7.4.
<b>Preservation:</b>	Preservative free.
<b>Purification:</b>	Purified from ascites by Protein G affinity chromatography.
<b>Immunogen:</b>	Cytoplasmic domain of human <i>c-erbB-2</i> protein.
<b>Specificity:</b>	<p>This antibody recognizes <i>c-erbB-2</i>, a receptor protein tyrosine kinase with <math>M_r=185</math> kDa, which is also known as p185<sup>HER-2</sup>. <i>c-erbB-2</i> is the cellular homolog of the neu oncogene.</p> <p><i>c-erbB-2</i> is comprised of an extracellular ligand binding domain, a single transmembrane domain, a tyrosine kinase domain, and a C terminal region which mediates signaling. <i>c-erbB-2</i> forms heterodimers with other members of the EGF receptor family, such as <i>c-erbB-1</i>. In response to ligand binding, <i>c-erbB-2</i> is autophosphorylated on five tyrosine residues at its C terminus, producing docking sites for SH2-domain containing proteins such as phospholipase C<math>\gamma</math>, PI3-K, Src, CHK, and others.</p> <p>Over-expression of <i>c-erbB-2</i> is observed in 15-40% of primary human breast tumors, and correlates with poor prognosis in node positive breast cancer. <i>c-erbB-2</i> over-expression is also observed in ovarian, gastric, salivary, and non-small cell lung carcinomas.</p>
<b>Species Reactivity:</b>	Human, mouse, and rat. Other species were not tested.
<b>Cellular Localization:</b>	Cell membrane.
<b>Applications:</b>	This antibody is suitable for use in immunoprecipitation (native and denatured), Western blotting, flow cytometry, and immunohistochemistry. Immunohistochemistry with formalin-fixed/paraffin embedded tissue requires boiling the sections in 10 mM citrate buffer, pH 6.0 for 10-20 minutes, followed by cooling at room temperature for 10 minutes.
<b>Suggested Working Dilutions:</b>	The recommended concentration for use in immunoprecipitation is 2 µg/mg cell lysate; for Western blotting, 1.0-2.0 µg/mL with 2 hour incubation; and for immunohistochemistry, 2-4 µg/mL with 30 minute incubation. The optimal concentration should be determined for each specific application.

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**Recommended Positive Control:**

SKBR-3 cells, T47D cells.

**Storage:**

Store at  $\leq -20^{\circ}\text{C}$ . Upon initial thawing, apportion into working aliquots and store at  $\leq -20^{\circ}\text{C}$ . Avoid repeated freeze-thaw cycles to prevent denaturing the antibody.

**Expiration Date:**

Expires one year from date of receipt when stored as instructed.

**References:**

Tandon, A.K., G.M. Clark, G.C. Chamness, A. Ullrich, and W.L. McGuire (1989) HER-2/neu oncogene protein and prognosis in breast cancer. *J. Clin. Oncol.* 7:1120-1128.

Slamon, D.J., W. Godolphin, L.A. Jones, J.A. Holt, S.G. Wong, D.E. Keith, W.J. Levin, S.G. Stuart, J. Udove, A. Ullrich, et al. (1989) Studies of the HER-2/neu proto-oncogene in human breast and ovarian cancer. *Science* 244:707-712.

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