

## Product datasheet

# Anti-ErbB2 / HER2 (phospho Y1221 + Y1222) antibody [EPR1047] ab91633

Recombinant RabMAb

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### Overview

<b>Product name</b>	Anti-ErbB2 / HER2 (phospho Y1221 + Y1222) antibody [EPR1047]
<b>Description</b>	Rabbit monoclonal [EPR1047] to ErbB2 / HER2 (phospho Y1221 + Y1222)
<b>Host species</b>	Rabbit
<b>Specificity</b>	ab91633 detects ErbB 2 phosphorylated at tyrosine 1222.
<b>Tested applications</b>	<b>Suitable for:</b> WB, Dot blot <b>Unsuitable for:</b> Flow Cyt, ICC/IF, IHC-P or IP
<b>Species reactivity</b>	<b>Reacts with:</b> Human
<b>Immunogen</b>	Synthetic peptide. This information is proprietary to Abcam and/or its suppliers.
<b>Positive control</b>	SKBR3 cell lysate
<b>General notes</b>	<p>This product is a recombinant monoclonal antibody, which offers several advantages including:</p> <ul style="list-style-type: none"><li>- High batch-to-batch consistency and reproducibility</li><li>- Improved sensitivity and specificity</li><li>- Long-term security of supply</li><li>- Animal-free production</li></ul> <p>For more information <a href="#">see here</a>.</p> <p>Our RabMAb<sup>®</sup> technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to <a href="#">RabMAb<sup>®</sup> patents</a>.</p> <p>Mouse, Rat: We have preliminary internal testing data to indicate this antibody may not react with these species. Please contact us for more information.</p>

### Properties

<b>Form</b>	Liquid
<b>Storage instructions</b>	Shipped at 4°C. Store at -20°C. Stable for 12 months at -20°C.
<b>Storage buffer</b>	pH: 7.20 Preservative: 0.01% Sodium azide Constituents: 9% PBS, 40% Glycerol (glycerin, glycerine), 0.05% BSA, 50% Tissue culture supernatant

<b>Purity</b>	Protein A purified
<b>Clonality</b>	Monoclonal
<b>Clone number</b>	EPR1047
<b>Isotype</b>	IgG

## Applications

**The Abpromise guarantee** Our **Abpromise guarantee** covers the use of ab91633 in the following tested applications. The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
<b>WB</b>		1/5000. Predicted molecular weight: 138 kDa.
<b>Dot blot</b>		Use at an assay dependent concentration.

**Application notes** Is unsuitable for Flow Cyt, ICC/IF, IHC-P or IP.

## Target

**Function** Protein tyrosine kinase that is part of several cell surface receptor complexes, but that apparently needs a coreceptor for ligand binding. Essential component of a neuregulin-receptor complex, although neuregulins do not interact with it alone. GP30 is a potential ligand for this receptor. Regulates outgrowth and stabilization of peripheral microtubules (MTs). Upon ERBB2 activation, the MEMO1-RHOA-DIAPH1 signaling pathway elicits the phosphorylation and thus the inhibition of GSK3B at cell membrane. This prevents the phosphorylation of APC and CLASP2, allowing its association with the cell membrane. In turn, membrane-bound APC allows the localization of MACF1 to the cell membrane, which is required for microtubule capture and stabilization. In the nucleus is involved in transcriptional regulation. Associates with the 5'-TCAAATTC-3' sequence in the PTGS2/COX-2 promoter and activates its transcription. Implicated in transcriptional activation of CDKN1A; the function involves STAT3 and SRC. Involved in the transcription of rRNA genes by RNA Pol I and enhances protein synthesis and cell growth.

**Tissue specificity** Expressed in a variety of tumor tissues including primary breast tumors and tumors from small bowel, esophagus, kidney and mouth.

**Involvement in disease** Hereditary diffuse gastric cancer  
Glioma  
Ovarian cancer  
Lung cancer  
Gastric cancer  
Chromosomal aberrations involving ERBB2 may be a cause gastric cancer. Deletions within 17q12 region producing fusion transcripts with CDK12, leading to CDK12-ERBB2 fusion leading to truncated CDK12 protein not in-frame with ERBB2.

**Sequence similarities** Belongs to the protein kinase superfamily. Tyr protein kinase family. EGF receptor subfamily. Contains 1 protein kinase domain.

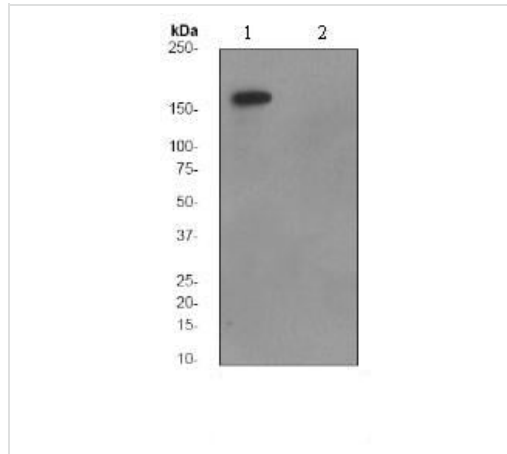
**Post-translational modifications** Autophosphorylated. Autophosphorylation occurs in trans, i.e. one subunit of the dimeric receptor phosphorylates tyrosine residues on the other subunit (Probable). Ligand-binding increases phosphorylation on tyrosine residues (PubMed:27134172). Signaling via SEMA4C promotes phosphorylation at Tyr-1248 (PubMed:17554007). Dephosphorylated by PTPN12

(PubMed:27134172).

## Cellular localization

Cytoplasm. Nucleus and Cell membrane. Cytoplasm, perinuclear region. Nucleus. Translocation to the nucleus requires endocytosis, probably endosomal sorting and is mediated by importin beta-1/KPNB1.

## Images



Western blot - Anti-ErbB2 / HER2 (phospho Y1221 + Y1222) antibody [EPR1047] (ab91633)

**All lanes :** Anti-ErbB2 / HER2 (phospho Y1221 + Y1222) antibody [EPR1047] (ab91633) at 1/5000 dilution

**Lane 1 :** SKBR3 cell lysate was untreated

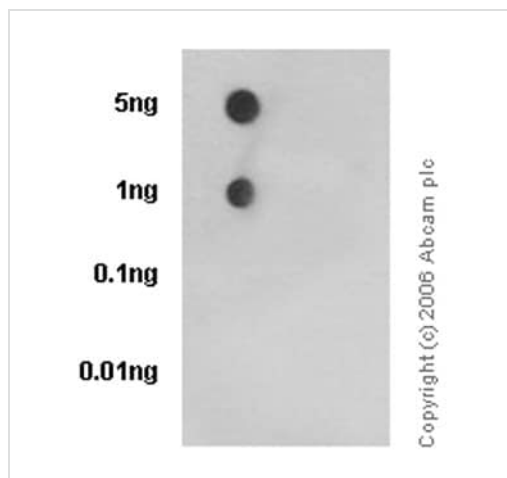
**Lane 2 :** SKBR3 cell lysate was treated with Lambda phosphatase.

Lysates/proteins at 10 µg per lane.

### Secondary

**All lanes :** HRP labelled goat anti-rabbit at 1/1000 dilution

**Predicted band size:** 138 kDa



Dot Blot - Anti-ErbB2 / HER2 (phospho Y1221 + Y1222) antibody [EPR1047] (ab91633)

Primary antibody dilution: 1/1000

Secondary antibody: goat anti-rabbit IgG, (H+L), peroxidase conjugated

Secondary antibody dilution: 1/2500

Blocking & dilution buffer: 5% NDM/TBST

Lane 1 sample: ErbB 2 (pY1221/pY1222) phospho peptide

Lane 2 sample: ErbB 2 non-phospho peptide

Exposure time: 3 minutes

### Why choose a recombinant antibody?



**Research with confidence**  
Consistent and reproducible results



**Long-term and scalable supply**  
Recombinant technology



**Success from the first experiment**  
Confirmed specificity



**Ethical standards compliant**  
Animal-free production

Anti-ErbB2 / HER2 (phospho Y1221 + Y1222)  
antibody [EPR1047] (ab91633)

**Please note:** All products are "FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES"

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