

## Product datasheet

# Anti-ErbB2 / HER2 (phospho Y877) antibody [EPR2324Y] ab75873

Recombinant RabMAb

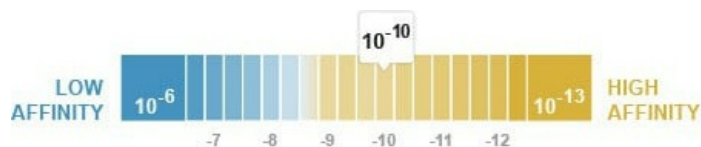
[1 References](#) [6 Images](#)

### Overview

<b>Product name</b>	Anti-ErbB2 / HER2 (phospho Y877) antibody [EPR2324Y]
<b>Description</b>	Rabbit monoclonal [EPR2324Y] to ErbB2 / HER2 (phospho Y877)
<b>Host species</b>	Rabbit
<b>Tested applications</b>	<b>Suitable for:</b> Dot blot, WB, ICC/IF, Flow Cyt (Intra) <b>Unsuitable for:</b> 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>	HeLa and SKBR3 cell lysates treated with EGF. SKBR3 cells.
<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>Dissociation constant (K<sub>D</sub>)</b>	K <sub>D</sub> = 8.30 x 10 <sup>-10</sup> M



[Learn more about K<sub>D</sub>](#)

<b>Storage buffer</b>	pH: 7.20 Preservative: 0.05% Sodium azide Constituents: 0.1% BSA, 40% Glycerol (glycerin, glycerine), 9.85% Tris glycine, 50% Tissue culture supernatant
<b>Purity</b>	Protein A purified
<b>Clonality</b>	Monoclonal
<b>Clone number</b>	EPR2324Y
<b>Isotype</b>	IgG

## Applications

**The Abpromise guarantee** Our [Abpromise guarantee](#) covers the use of ab75873 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
Dot blot		1/1000.
WB		1/500 - 1/1000. Detects a band of approximately 180 kDa (predicted molecular weight: 138 kDa).
ICC/IF		1/50 - 1/100.
Flow Cyt (Intra)		Use at an assay dependent concentration.

**Application notes** Is unsuitable for 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.

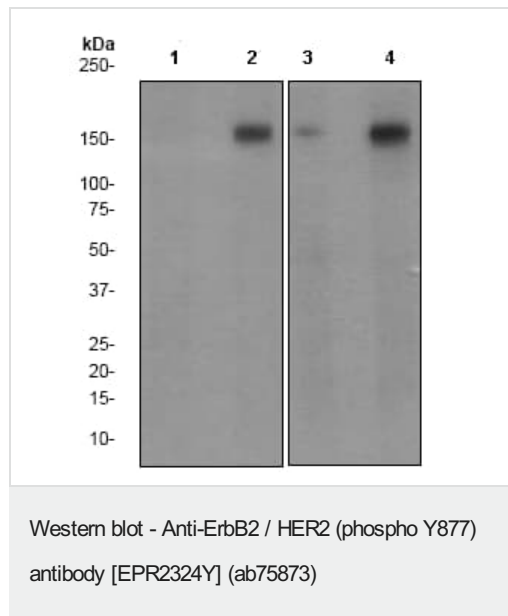
### Post-translational modifications

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



**All lanes :** Anti-ErbB2 / HER2 (phospho Y877) antibody [EPR2324Y] (ab75873) at 1/1000 dilution

**Lane 1 :** HeLa cell lysate, untreated

**Lane 2 :** HeLa cell lysate, treated with EGF

**Lane 3 :** SKBR-3 cell lysate, untreated

**Lane 4 :** SKBR-3 cell lysate, treated with EGF

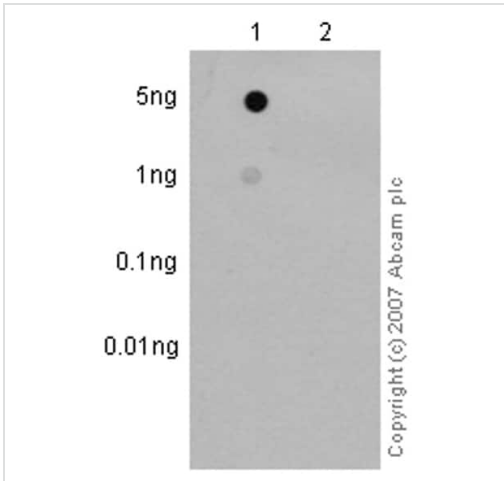
Lysates/proteins at 10 µg per lane.

### Secondary

**All lanes :** HRP labelled goat anti-rabbit at 1/2000 dilution

**Predicted band size:** 138 kDa

**Observed band size:** 180 kDa

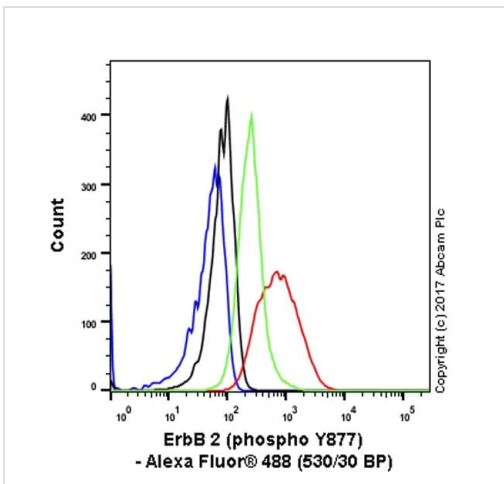


Dot Blot - Anti-ErbB2 / HER2 (phospho Y877) antibody [EPR2324Y] (ab75873)

Dot blot analysis of ErbB 2 (pY877) peptide (Lane 1) and ErbB 2 non-phospho peptide (Lane 2) labelling ErbB 2 (phospho Y877) with ab75873 at a dilution of 1/1000. A Peroxidase-conjugated goat anti-rabbit IgG (H+L) was used as the secondary antibody at a dilution of 1/2500.

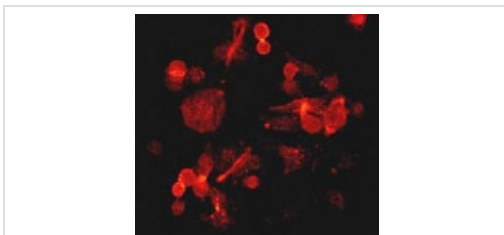
Blocking and dilution buffer: 5% NFDm/TBST.

Exposure time: 3 minutes.



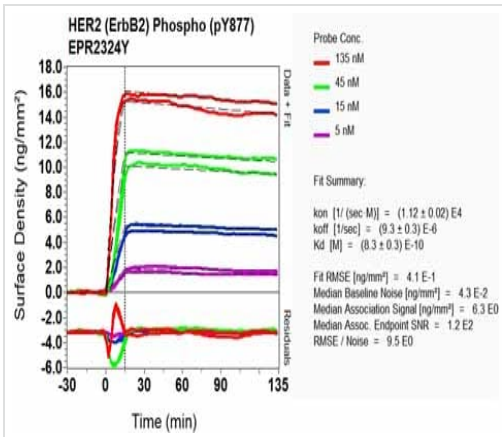
Flow Cytometry (Intracellular) - Anti-ErbB2 / HER2 (phospho Y877) antibody [EPR2324Y] (ab75873)

Intracellular Flow Cytometry analysis of A431 (human epidermoid carcinoma) untreated/treated with 200 ng/ml EGF for 15 minutes labeling ErbB 2 with unpurified ab75873 at 1/20 (red). Cells were fixed with 4% paraformaldehyde and permeabilised with 90% methanol. A Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) (**ab150077**) (1/2000 dilution) was used as the secondary antibody. Rabbit IgG, monoclonal [EPR25A] - Isotype Control (**ab172730**) (Black) was used as the isotype control, cells without incubation with primary antibody and secondary antibody (Blue) were used as the unlabeled control.



Immunocytochemistry/ Immunofluorescence - Anti-ErbB2 / HER2 (phospho Y877) antibody [EPR2324Y] (ab75873)

ab75873 at 1/50 dilution staining ErbB 2 in SKBR3 cells by Immunofluorescence.



Equilibrium disassociation constant ( $K_D$ )

Learn more about  $K_D$

[Click here to learn more about  \$K\_D\$](#)

OI-RD Scanning - Anti-ErbB2 / HER2 (phospho Y877) antibody [EPR2324Y] (ab75873)

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 Y877) antibody [EPR2324Y] (ab75873)

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

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