

Product datasheet

Anti-ErbB2 / HER2 (phospho Y1139) antibody [EP1046Y] ab53290

Recombinant RabMAb

★★★★★ [1 Abreviews](#) [14 References](#) [6 Images](#)

Overview

Product name	Anti-ErbB2 / HER2 (phospho Y1139) antibody [EP1046Y]
Description	Rabbit monoclonal [EP1046Y] to ErbB2 / HER2 (phospho Y1139)
Host species	Rabbit
Tested applications	Suitable for: WB, IP, Dot blot Unsuitable for: ICC/IF, IHC-Fr or IHC-P
Species reactivity	Reacts with: Human
Immunogen	Synthetic peptide. This information is proprietary to Abcam and/or its suppliers.
Positive control	WB: SKBR3 and A431 cell lysates treated with EGF.
General notes	<p>This product is a recombinant monoclonal antibody, which offers several advantages including:</p> <ul style="list-style-type: none"> - High batch-to-batch consistency and reproducibility - Improved sensitivity and specificity - Long-term security of supply - Animal-free production <p>For more information see here.</p> <p>Our RabMAb[®] technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to RabMAb[®] patents.</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

Form	Liquid
Storage instructions	Shipped at 4°C. Upon delivery aliquot and store at -20°C. Avoid freeze / thaw cycles.
Storage buffer	<p>pH: 7.20</p> <p>Preservative: 0.01% Sodium azide</p> <p>Constituents: 9% PBS, 40% Glycerol (glycerin, glycerine), 0.05% BSA, 50% Tissue culture supernatant</p>
Purity	Protein A purified

Clonality	Monoclonal
Clone number	EP1046Y
Isotype	IgG

Applications

The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab53290 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
WB	★★★★★ (1)	1/500 - 1/1000. Detects a band of approximately 185 kDa (predicted molecular weight: 138 kDa).
IP		1/30.
Dot blot		1/1000.

Application notes Is unsuitable for ICC/IF, IHC-Fr or IHC-P.

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.

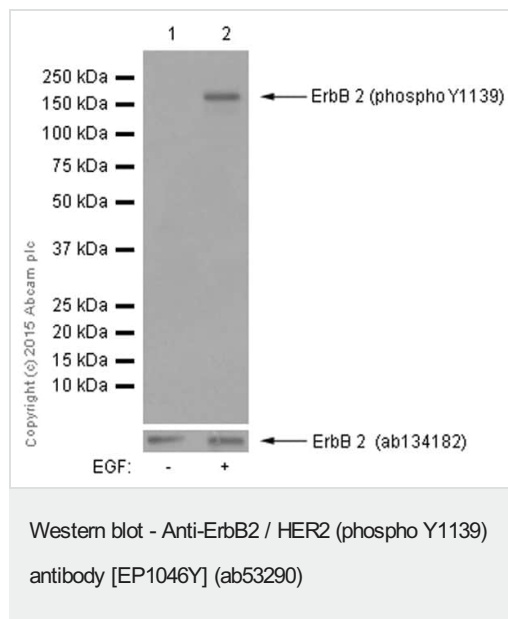
Post-translational modifications Autophosphorylated. Autophosphorylation occurs in trans, i.e. one subunit of the dimeric receptor phosphorylates tyrosine residues on the other subunit (Probable). Ligand-binding increases

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 Y1139) antibody
[EP1046Y] (ab53290) at 1/500 dilution

Lane 1 : A431 whole cell lysate - untreated

Lane 2 : A431 whole cell lysate - treated with Epidermal Growth
Factor (EGF)

Lysates/proteins at 10 µg per lane.

Secondary

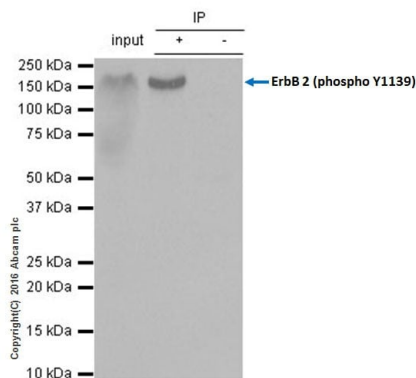
All lanes : Peroxidase-conjugated goat anti-rabbit IgG (H+L) at
1/1000 dilution

Predicted band size: 138 kDa

Observed band size: 185 kDa

Exposure time: 3 minutes

Blocking and dilution buffer: 5% NFDM/TBST.



Immunoprecipitation - Anti-ErbB2 / HER2 (phospho Y1139) antibody [EP1046Y] (ab53290)

ab53290 at 1/70 dilution immunoprecipitating ErbB 2 (phospho Y1139) in A431(human epidermoid carcinoma) whole cell lysate.

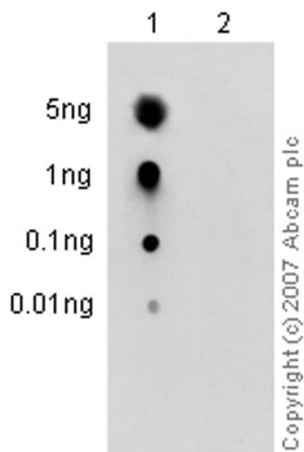
Lane 1 (input): A431 treated with 100 ng/mL EGF for 10 minutes whole cell lysate 10µg

Lane 2 (+): ab53290 + A431 treated with 100 ng/mL EGF for 10 minutes whole cell lysate

Lane 3 (-): Rabbit monoclonal IgG ([ab172730](#)) instead of ab53290 in A431 treated with 100 ng/mL EGF for 10 minutes whole cell lysate

VeriBlot for IP Detection Reagent (HRP) ([ab131366](#)), was used for detection at 1/1000 dilution.

Blocking and Diluting buffer and concentration: 5% NFD/MTBST.

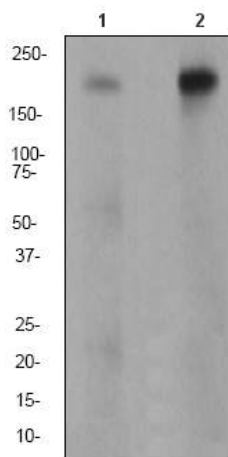


Dot Blot - Anti-ErbB2 / HER2 (phospho Y1139) antibody [EP1046Y] (ab53290)

Dot blot analysis of ErbB 2 (pY1139) peptide (Lane 1) and ErbB 2 non-phospho peptide (Lane 2) labelling ErbB 2 (phospho Y1139) with ab53290 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% NFD/MTBST.

Exposure time: 3 minutes.



Western blot - Anti-ErbB2 / HER2 (phospho Y1139) antibody [EP1046Y] (ab53290)

All lanes : Anti-ErbB2 / HER2 (phospho Y1139) antibody [EP1046Y] (ab53290) at 1/1000 dilution

Lane 1 : SKBR3 cell lysate

Lane 2 : SKBR3 cell lysate - treated with EGF

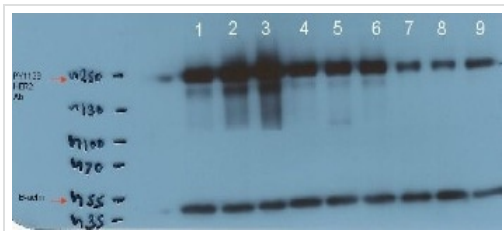
Lysates/proteins at 10 µg per lane.

Secondary

All lanes : HRP-conjugated goat anti-rabbit IgG at 1/2000 dilution

Predicted band size: 138 kDa

Observed band size: 185 kDa



Western blot - Anti-ErbB2 / HER2 (phospho Y1139) antibody [EP1046Y] (ab53290)

This image is courtesy of an Abreview by Surekha Pimple.

All lanes : Anti-ErbB2 / HER2 (phospho Y1139) antibody

[EP1046Y] (ab53290) at 1/2000 dilution

Lane 1 : HTB-20 Human breast ductal carcinoma lysate untreated

Lanes 2-9 : HTB-20 Human breast ductal carcinoma lysate treated with HER-2 inhibitor

Lysates/proteins at 10 µg per lane.

Secondary

All lanes : HRP-conjugated Mouse anti-Rabbit monoclonal at

1/20000 dilution

Developed using the ECL technique.

Performed under reducing conditions.

Predicted band size: 138 kDa

Exposure time: 5 seconds

Lanes 2-9 are treated with an increasing concentration of HER2 inhibitor.

Blocking performed with 5% Milk for 1 hour at room temperature.

Antibody diluted in CPPT and incubated for 16 hours at 4°C.

Performed under denaturing conditions.

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 Y1139) antibody

[EP1046Y] (ab53290)

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