abcam

Product datasheet

Anti-ErbB2 / HER2 (phospho Y877) antibody ab47262

3 Abreviews 9 References 5 Images

Overview

Product name	Anti-ErbB2 / HER2 (phospho Y877) antibody
Description	Rabbit polyclonal to ErbB2 / HER2 (phospho Y877)
Host species	Rabbit
Tested applications	**Suitable for:** IHC-P, WB
Species reactivity	**Reacts with:** Mouse, Human
Immunogen	Synthetic peptide corresponding to Human ErbB2/ HER2 aa 850-950 (phospho Y877). Database link: **P04626**
Positive control	IHC-P: Human breast carcinoma tissue; Mouse placenta tissue. WB: HepG2 and HeLa cell lysates; GGF-treated Rat Schwann cell lysate.
General notes	The Life Science industry has been in the grips of a reproducibility crisis for a number of years. Abcam is leading the way in addressing this with our range of recombinant monoclonal antibodies and knockout edited cell lines for gold-standard validation. Please check that this product meets your needs before purchasing. If you have any questions, special requirements or concerns, please send us an inquiry and/or contact our Support team ahead of purchase. Recommended alternatives for this product can be found below, along with publications, customer reviews and Q&As

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Store at -20°C. Stable for 12 months at -20°C.
Storage buffer	pH: 7.40 Preservative: 0.02% Sodium azide Constituents: PBS, 50% Glycerol (glycerin, glycerine), 0.87% Sodium chloride Without Mg+2 and Ca+2
Purity	Immunogen affinity purified
Purification notes	This antibody was affinity purified from rabbit antiserum by affinity chromatography using epitope specific phosphopeptide. The antibody against non phosphopeptide was removed by chromatography using non phosphopeptide corresponding to the phosphorylation site.
Clonality	Polyclonal

Isotype	IgG

Applications

The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab47262 in the following tested applications.

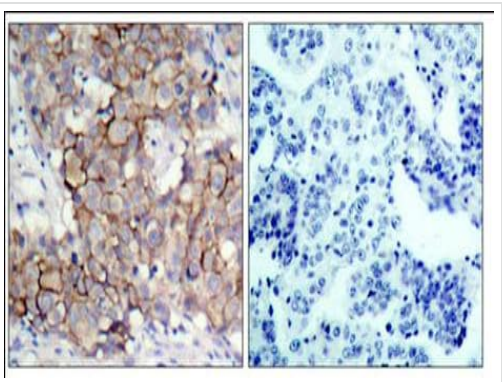
The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
IHC-P		Use at an assay dependent concentration.
WB	★★★☆☆ (3)	1/500 - 1/1000. Predicted molecular weight: 138 kDa.

Target

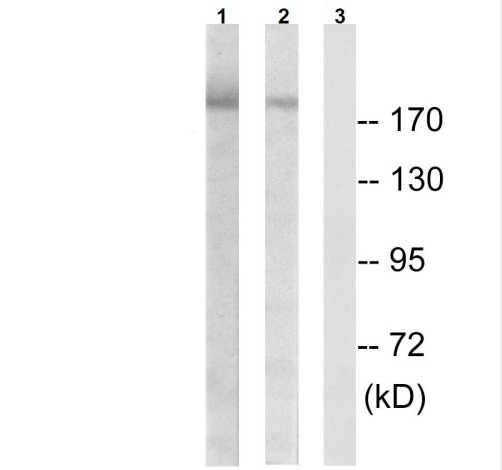
Function	Protein tyrosine kinase that is part of several cell surface receptor complexes, but that apparently needs a coreceptor for ligand binding. Essential component of a neuregulin-receptor complex, although neuregulins do not interact with it alone. GP30 is a potential ligand for this receptor. 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



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-ErbB2 / HER2 (phospho Y877) antibody (ab47262)

Staining of phosphorilated ErB 2 on breast carcinoma tissue sections using ab47262 at a 1/50 dilution. Right panel: the antibody was pre-incubated with synthesized phosphopeptide.



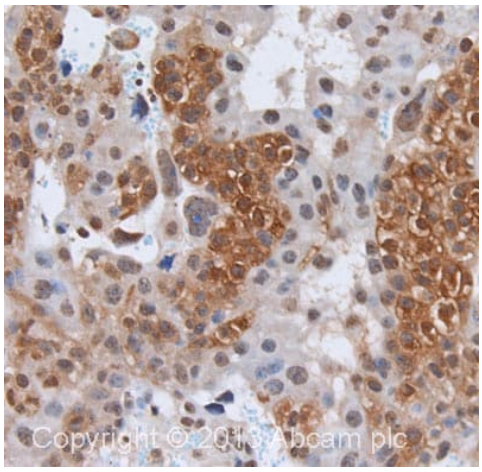
Western blot - Anti-ErbB2 / HER2 (phospho Y877) antibody (ab47262)

All lanes : Anti-ErbB2 / HER2 (phospho Y877) antibody (ab47262) (Anti-ErbB2 / HER2 (phospho Y877) antibody)

Lane 1 : HepG2 cell lysate
Lane 2 : HeLa cell lysate
Lane 3 : HepG2 cell lysate (blocked with the phospho peptide)

Predicted band size: 138 kDa

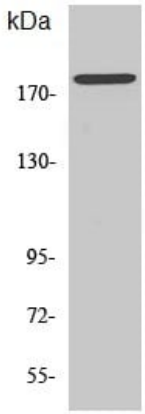
Western blot analysis of HepG2 and HeLa cell lysate using Anti-ErbB2 / HER2 (phospho Y877) antibody (ab47262).



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-ErbB2 / HER2 (phospho Y877) antibody (ab47262)

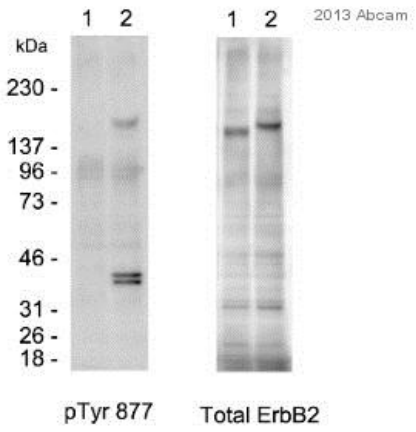
IHC image of Angiotensin II Type 1 Receptor staining in Mouse Placenta formalin fixed paraffin embedded tissue section, performed on a Leica Bond™ system using the standard protocol B. The section was pre-treated using heat mediated antigen retrieval with sodium citrate buffer (pH6, epitope retrieval solution 1) for 20 mins. The section was then incubated with ab47262, 1 µg/ml, for 15 mins at room temperature and detected using an HRP conjugated ABC system. DAB was used as the chromogen. The section was then counterstained with haematoxylin and mounted with DPX.

For other IHC staining systems (automated and non-automated) customers should optimize variable parameters such as antigen retrieval conditions, primary antibody concentration and antibody incubation times.



Western blot - Anti-ErbB2 / HER2 (phospho Y877) antibody (ab47262)

Western blot analysis of HeLa cell lysate using Anti-ErbB2 (phospho Y877) antibody (ab47262) at 1/500 dilution.



Western blot - Anti-ErbB2 / HER2 (phospho Y877) antibody (ab47262)

This image is courtesy of an anonymous Abreview

All lanes : Anti-ErbB2 / HER2 (phospho Y877) antibody (ab47262) at 1/500 dilution

Lane 1 : Schwann cell extract untreated

Lane 2 : Schwann cell extract treated with 10 ng/ml GGF for 30 minutes.

Lysates/proteins at 10 µg per lane.

Secondary

All lanes : HRP conjugated goat anti-rabbit IgG at 1/10000 dilution

Developed using the ECL technique.

Performed under reducing conditions.

Predicted band size: 138 kDa

Observed band size: 200 kDa

Exposure time: 1 minute

Lanes on the left hand side show phosphorylation of ErbB2 at tyrosine 877 (ab47262) in rat Schwann cells upon incubation with 10 ng/ml GGF for 30 minutes (lane 2).

Incubation with 10 ng/ml GGF for 30 minutes does not change the amount of total ErbB2 in rat Schwann cells (as shown on right hand side lanes).

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