




Product datasheet

Anti-ErbB2 / HER2 antibody [3B5] ab16901

★★★★★ [11 Abreviews](#) [63 References](#) [7 Images](#)

Overview

Product name	Anti-ErbB2 / HER2 antibody [3B5]
Description	Mouse monoclonal [3B5] to ErbB2 / HER2
Host species	Mouse
Tested applications	Suitable for: IHC-P, WB, Flow Cyt
Species reactivity	Reacts with: Human Predicted to work with: Mouse, Rat, Dog, Monkey 
Immunogen	Synthetic peptide corresponding to Human ErbB2/ HER2 aa 1242-1255 (C terminal). Sequence: TAENPEYLGLDVPV Database link: P04626 <div>  Run BLAST with  Run BLAST with </div>
Epitope	Within amino acids 1242 - 1255 of human c-neu (TAENPEYLGLDVPV)
Positive control	SK-BR-3 cells or breast carcinoma tissue
General notes	<p>For paraffin sections, we recommend pretreating with a pressure cooker, but trypsin and heat will also work well. Including 0.05% saponin during staining of paraffin sections may help reduce background. In one study ductal carcinomas in situ displaying large-cell, comedo growth type, were stained while none of 16 ductal carcinomas in situ of small-cell, papillary, or cribriform growth type were stained by this antibody.</p> <p>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.</p> <p>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</p>

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Upon delivery aliquot and store at -20°C. Avoid freeze / thaw cycles.

Storage buffer	Preservative: 0.09% Sodium azide Constituent: PBS
Purity	Protein G purified
Clonality	Monoclonal
Clone number	3B5
Isotype	IgG1

Applications

The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab16901 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	★★★★★ (3)	Use at an assay dependent concentration.
WB	★★★★★ (5)	Use a concentration of 2.5 µg/ml. Detects a band of approximately 190 kDa (predicted molecular weight: 138 kDa).
Flow Cyt	★★★★★ (1)	1/50 - 1/100. ab170190 - Mouse monoclonal IgG1, is suitable for use as an isotype control with this antibody.

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.

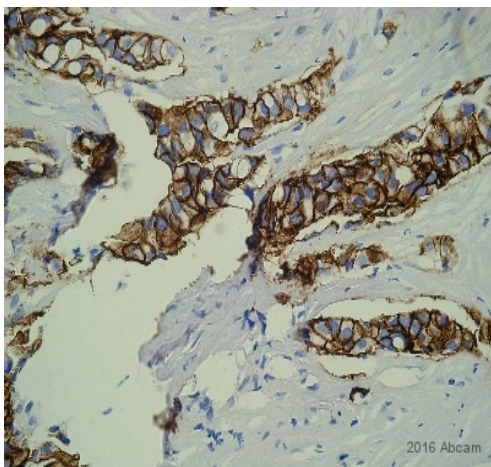
Post-translational modifications

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.

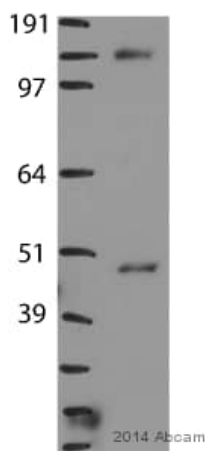
Images



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-ErbB2 / HER2 antibody [3B5] (ab16901)

This image is courtesy of an anonymous abreview.

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of human breast cancer tissue sections labeling ErbB2 / HER2 with ab16901 at 1/400 dilution. the tissue was fixed with formaldehyde; heat mediated antigen retrieval was performed using a acetate buffer pH6. An undiluted goat anti-mouse HRP conjugated secondary antibody was used.



Western blot - Anti-ErbB2 / HER2 antibody [3B5] (ab16901)

This image is courtesy of an anonymous abreview.

Anti-ErbB2 / HER2 antibody [3B5] (ab16901) at 1/250 dilution + Human Huh7 whole cell lysate at 20 µg

Secondary

Goat anti-mouse HRP conjugate at 1/5000 dilution

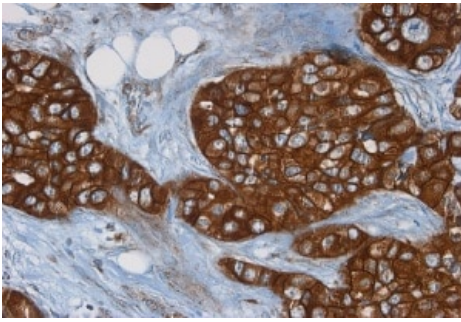
Predicted band size: 138 kDa

Observed band size: 138 kDa

Additional bands at: 48 kDa (possible non-specific binding)

Exposure time: 5 minutes

Blocking: 5% milk for 1 hour at 25°C.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-ErbB2 / HER2 antibody [3B5] (ab16901)

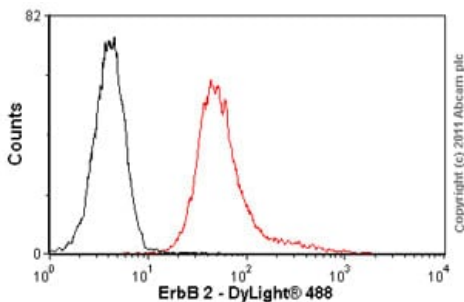
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of human Mamma tumor Her2Neu tissue labeling ErbB 2 with ab16901.



Western blot - Anti-ErbB2 / HER2 antibody [3B5] (ab16901)

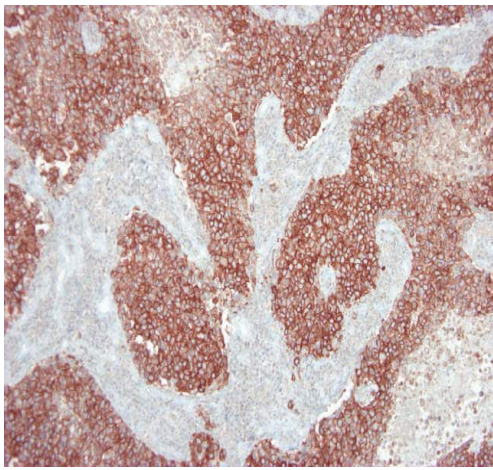
Anti-ErbB2 / HER2 antibody [3B5] (ab16901) at 1 µg/ml + Whole cell lysate HEK293

Predicted band size: 138 kDa



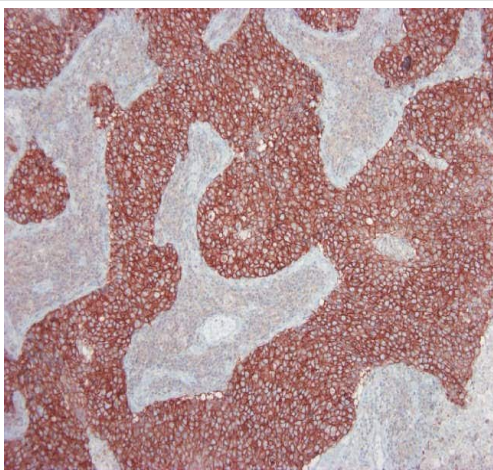
Flow Cytometry - Anti-ErbB2 / HER2 antibody [3B5] (ab16901)

Overlay histogram showing LoVo cells stained with ab16901 (red line). The cells were fixed with methanol (5 min) and then permeabilized with 0.1% PBS-Tween for 20 min. The cells were then incubated in 1x PBS / 10% normal goat serum / 0.3M glycine to block non-specific protein-protein interactions followed by the antibody (ab16901, 1/100 dilution) for 30 min at 22°C. The secondary antibody used was DyLight® 488 goat anti-mouse IgG (H+L) ([ab96879](#)) at 1/500 dilution for 30 min at 22°C. Isotype control antibody (black line) was mouse IgG1 [ICIGG1] ([ab91353](#), 2µg/1x10⁶ cells) used under the same conditions. Acquisition of >5,000 events was performed. This antibody gave a positive signal in LoVo cells fixed with 4% paraformaldehyde (10 min)/permeabilized with 0.1% PBS-Tween used under the same conditions.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of human breast carcinoma labeling ErbB 2 with ab16901 at 1/100.

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-ErbB2 / HER2 antibody [3B5] (ab16901)



Immunohistochemistry analysis of formalin fixed, paraffin embedded tissue section of human breast carcinoma labeling ErbB 2 with ab16901 at dilution of 1/1000.

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-ErbB2 / HER2 antibody [3B5] (ab16901)

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