abcam

Product datasheet

Anti-ErbB2 / HER2 (phospho Y877) antibody [EP2324Y] ab108371

Recombinant RabMAb

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Overview

Product name	Anti-ErbB2 / HER2 (phospho Y877) antibody [EP2324Y]
Description	Rabbit monoclonal [EP2324Y] to ErbB2 / HER2 (phospho Y877)
Host species	Rabbit
Tested applications	**Suitable for:** WB, IHC-P, Dot blot, ICC/IF, Flow Cyt (Intra) **Unsuitable for:** IP
Species reactivity	**Reacts with:** Human
Immunogen	Synthetic peptide. This information is proprietary to Abcam and/or its suppliers.
Positive control	HeLa cell lysate, SKBR-3 cell lysate, Human breast ductal infiltrating carcinoma tissue, SKBR-3 cells.
General notes	This product is a recombinant monoclonal antibody, which offers several advantages including: - High batch-to-batch consistency and reproducibility - Improved sensitivity and specificity - Long-term security of supply - Animal-free production For more information **see here**. Our RabMAb® technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to **RabMAb® patents**. Mouse, Rat: We have preliminary internal testing data to indicate this antibody may not react with these species. Please contact us for more information.

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Store at -20°C. Stable for 12 months at -20°C.
Storage buffer	pH: 7.20 Preservative: 0.01% Sodium azide Constituents: 0.31% Sodium citrate, 0.175% Sodium chloride, 0.0172% EDTA disodium salt, 59% PBS, 40% Glycerol (glycerin, glycerine), 0.05% BSA

Purity	Protein A purified
Clonality	Monoclonal
Clone number	EP2324Y
Isotype	IgG

Applications

The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab108371 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. Predicted molecular weight: 138 kDa.
IHC-P		1/250 - 1/500. Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol. Perform antigen retrieval before commencing with IHC staining protocol
Dot blot		1/1000.
ICC/IF		1/50 - 1/100.
Flow Cyt (Intra)		Use at an assay dependent concentration.

Application notes Is unsuitable for IP.

Target

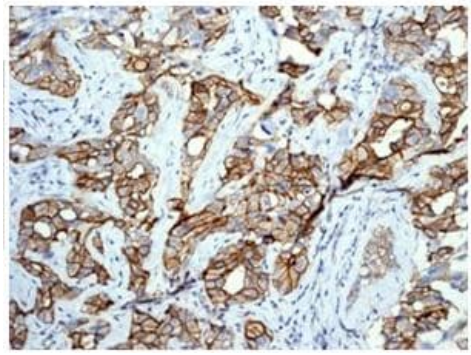
Function Protein tyrosine kinase that is part of several cell surface receptor complexes, but that apparently needs a coreceptor for ligand binding. Essential component of a neuregulin-receptor complex, although neuregulins do not interact with it alone. GP30 is a potential ligand for this receptor.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

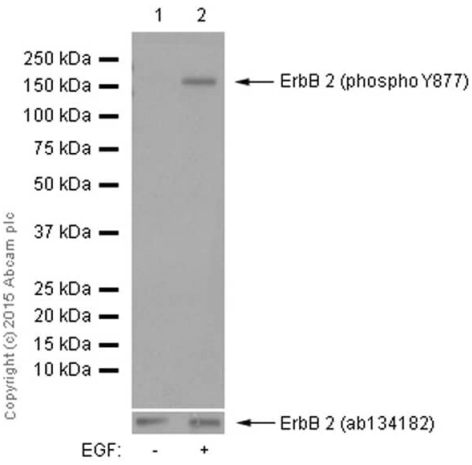
Images



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-ErbB2 / HER2 (phospho Y877) antibody [EP2324Y] (ab108371)

ab108371, at 1/250, staining Human ErbB2 / HER2 (phospho Y877) in Human breast ductal infiltrating carcinoma tissue by immunohistochemistry.

Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.



Western blot - Anti-ErbB2 / HER2 (phospho Y877) antibody [EP2324Y] (ab108371)

All lanes : Anti-ErbB2 / HER2 (phospho Y877) antibody [EP2324Y] (ab108371) at 1/1000 dilution

Lane 1 : A431 cell lysate - untreated
Lane 2 : A431 cell lysate - treated with Epidermal Growth Factor (EGF)

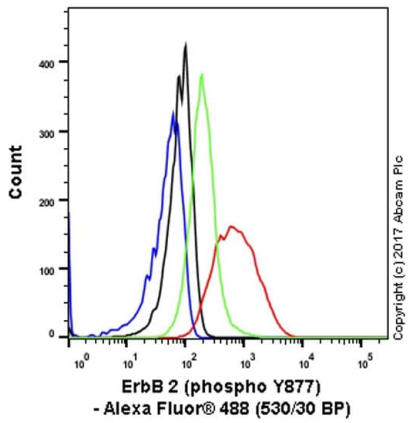
Lysates/proteins at 10 µg per lane.

Secondary
All lanes : Peroxidase-conjugated goat anti-rabbit IgG (H+L) at 1/100000 dilution

Predicted band size: 138 kDa
Observed band size: 180 kDa

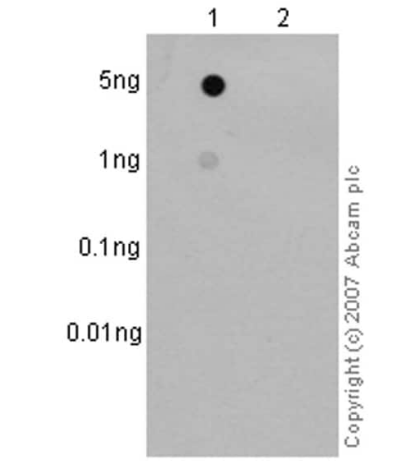
Exposure time: 1 minute

Blocking and dilution buffer: 5% NFDM/TBST.



Flow Cytometry (Intracellular) - Anti-ErbB2 / HER2 (phospho Y877) antibody [EP2324Y] (ab108371)

Intracellular Flow Cytometry analysis of A431 (human epidermoid carcinoma) untreated/treated with 200 ng/ml EGF for 15 minutes labeling ErbB2 / HER2 with purified ab108371 at 1/20. 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.

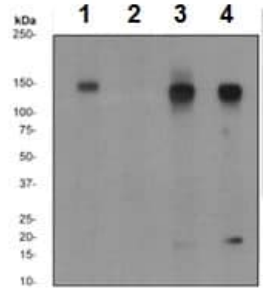


Dot Blot - Anti-ErbB2 / HER2 (phospho Y877) antibody [EP2324Y] (ab108371)

Dot blot analysis of ErbB 2 (pY877) peptide (Lane 1) and ErbB2 / HER2 non-phospho peptide (Lane 2) labelling ErbB 2 (phospho Y877) with ab108371 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.



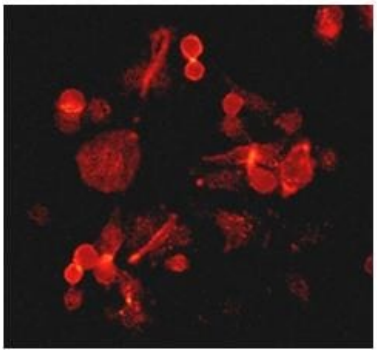
Western blot - Anti-ErbB2 / HER2 (phospho Y877) antibody [EP2324Y] (ab108371)

All lanes : Anti-ErbB2 / HER2 (phospho Y877) antibody [EP2324Y] (ab108371) at 1/500 dilution

Lane 1 : HeLa cell lysate
Lane 2 : EGF treated HeLa cell lysate
Lane 3 : SKBR-3 cell lysate
Lane 4 : EGF treated SKBR-3 cell lysate

Lysates/proteins at 10 µg per lane.

Predicted band size: 138 kDa



Immunocytochemistry/ Immunofluorescence - Anti-ErbB2 / HER2 (phospho Y877) antibody [EP2324Y] (ab108371)

ab108371, at 1/50 dilution, staining Human ErbB2 / HER2 (phospho Y877) in SKBR-3 cells by immunofluorescence.

Anti-ErbB2 / HER2 (phospho Y877) antibody [EP2324Y] (ab108371)

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