abcam

Product datasheet

# Anti-ErbB2 / HER2 antibody [HRB2/451] - BSA and Azide free ab212339

7 Images

## Overview

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|---|---|
| **Product name** | Anti-ErbB2 / HER2 antibody [HRB2/451] - BSA and Azide free |
| **Description** | Mouse monoclonal [HRB2/451] to ErbB2 / HER2 - BSA and Azide free |
| **Host species** | Mouse |
| **Specificity** | ab212339 is specific to ErbB 2 and shows minimal cross-reaction with other members of the family. |
| **Tested applications** | **Suitable for:** Flow Cyt, Protein Array, ICC, IHC-P |
| **Species reactivity** | **Reacts with:** Human |
| **Immunogen** | Recombinant full length protein corresponding to Human ErbB2/ HER2.<br>Database link: **P04626** |
| **Positive control** | IHC-P: Human breast carcinoma tissue; Flow Cyt: Human MCF7 and SKBR-3 cells; ICC: MCF7 cells. |
| **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.<br>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

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| **Form** | Liquid |
| **Storage instructions** | Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C long term. Avoid freeze / thaw cycle. |
| **Storage buffer** | pH: 7.2<br>Constituent: 100% PBS |
| **Carrier free** | Yes |
| **Purity** | Protein G purified |
| **Purification notes** | ab212339 was purified from Bioreactor Concentrate by Protein A/G. |

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| **Clonality** | Monoclonal |
| **Clone number** | HRB2/451 |
| **Isotype** | IgG1 |
| **Light chain type** | kappa |

## Applications

**The Abpromise guarantee** Our **Abpromise guarantee** covers the use of ab212339 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 |
|---|---|---|
| **Flow Cyt** | | Use at an assay dependent concentration. |
| **Protein Array** | | Use at an assay dependent concentration. |
| **ICC** | | Use a concentration of 1 - 4 µg/ml. |
| **IHC-P** | | Use a concentration of 0.5 - 1 µg/ml. Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.<br>(Primary incubation for 30 min at room temperature). |

## 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.

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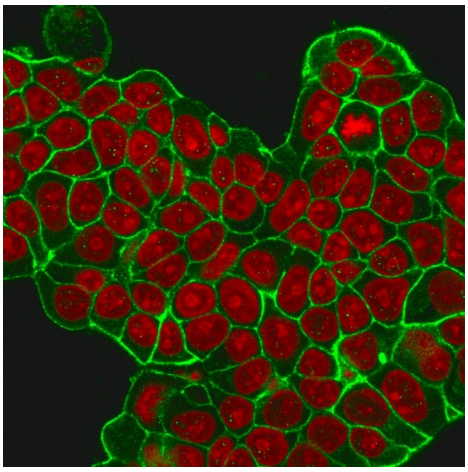
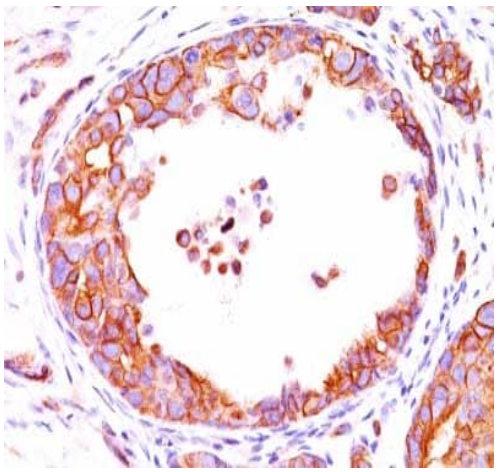
| | Contains 1 protein kinase domain. |
| **Post-translational modifications** | Autophosphorylated. Autophosphorylation occurs in trans, i.e. one subunit of the dimeric receptor phosphorylates tyrosine residues on the other subunit (Probable). Ligand-binding increases phosphorylation on tyrosine residues (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



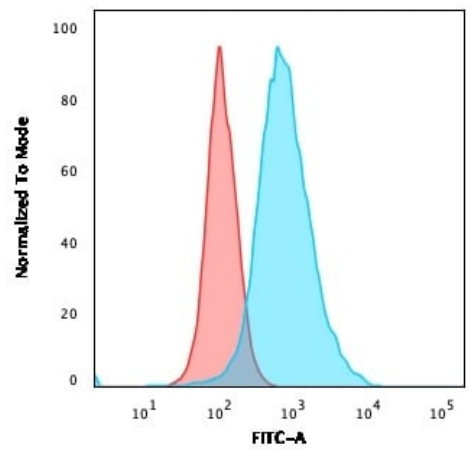
Immunocytochemistry - Anti-ErbB2 / HER2 antibody [HRB2/451] - BSA and Azide free (ab212339)

Immunofluorescent staining of Methanol-fixed MCF-7 cells labeling ErbB2 / HER2 with ab212339 followed by goat anti-Mouse IgG-CF488 (Green). Nuclei are stained with Reddot (Red).



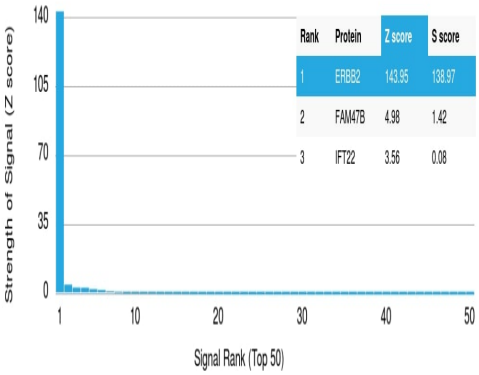
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-ErbB2 / HER2 antibody [HRB2/451] - BSA and Azide free (ab212339)

Immunohistochemical analysis of formalin-fixed, paraffin-embedded Human breast carcinoma tissue labeling ErbB 2 with ab212339 at 1 µg/ml.




Flow Cytometry - Anti-ErbB2 / HER2 antibody [HRB2/451] - BSA and Azide free (ab212339)

Flow Cytometric analysis of human trypsinized SK-BR-3 (human mammary gland adenocarcinoma cell line) cells labeling ErbB2 / HER2 with ab212339 followed by Goat anti-Mouse IgG-CF488 (Blue); Isotype control (Red).



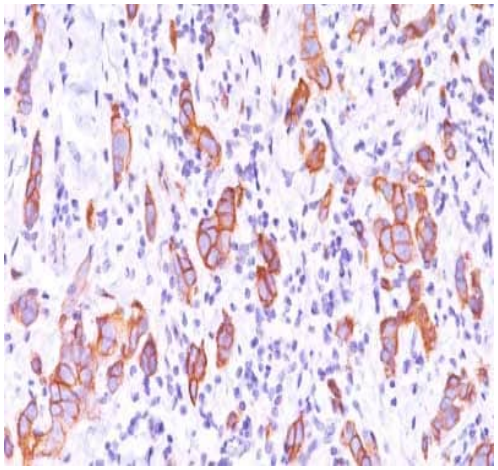

Protein Array - Anti-ErbB2 / HER2 antibody [HRB2/451] - BSA and Azide free (ab212339)

This data was produced with **ab187288**, the same antibody in a different formulation with BSA and Azide.

**ab187288** was tested in protein array against over 19000 different full-length human proteins.

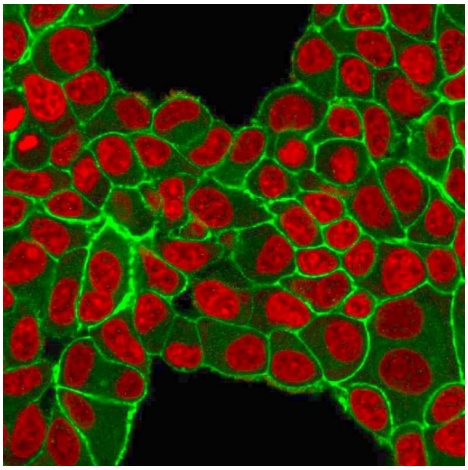
Z- and S- Score: The Z-score represents the strength of a signal that a monoclonal antibody (MAb) (in combination with a fluorescently-tagged anti-IgG secondary antibody) produces when binding to a particular protein on the HuProtTM array. Z-scores are described in units of standard deviations (SD's) above the mean value of all signals generated on that array. If targets on HuProtTM are arranged in descending order of the Z-score, the S-score is the difference (also in units of SD's) between the Z-score. S-score therefore represents the relative target specificity of a MAb to its intended target.

A MAb is specific to its intended target if the MAb has an S-score of at least 2.5. For example, if a MAb binds to protein X with a Z-score of 43 and to protein Y with a Z-score of 14, then the S-score for the binding of that MAb to protein X is equal to 29.



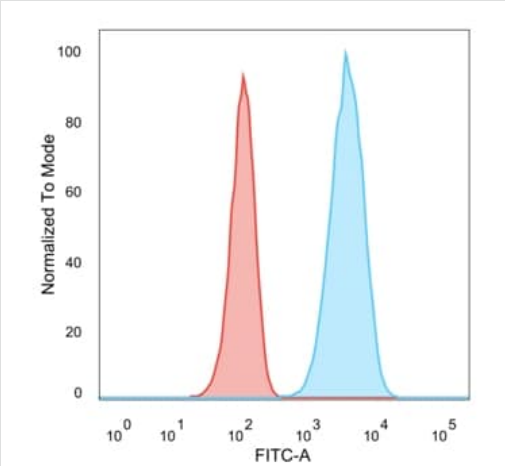
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-ErbB2 / HER2 antibody [HRB2/451] - BSA and Azide free (ab212339)

Immunohistochemical analysis of formalin-fixed, paraffin-embedded Human breast carcinoma tissue labeling ErbB 2 with ab212339 at 1 µg/ml.



Immunocytochemistry - Anti-ErbB2 / HER2 antibody [HRB2/451] - BSA and Azide free (ab212339)

Immunofluorescent staining of PFA-fixed MCF-7 cells labeling ErbB2 / HER2 with ab212339 followed by goat anti-Mouse IgG-CF488 (Green). Nuclei are stained with Reddot (Red).




Flow Cytometry - Anti-ErbB2 / HER2 antibody [HRB2/451] - BSA and Azide free (ab212339)

Flow Cytometric analysis of human trypsinized MCF7 (human breast adenocarcinoma cell line) cells labeling ErbB2 / HER2 with ab212339 followed by Goat anti-Mouse IgG-CF488 (Blue); Isotype control (Red).



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