abcam

ab212343

# Anti-ErbB2 / HER2 antibody [ERB2/776] - BSA and Azide free

## Key facts

| | |
|---|---|
| **Isotype** | IgG1 |
| **Host species** | Mouse |
| **Storage buffer** | pH: 7.2 - 7.4 Constituents: PBS |
| **Form** | Liquid |
| **Clonality** | Monoclonal |
| **Immunogen** | Recombinant Fragment Protein within Human ERBB2. The exact immunogen used to generate this antibody is proprietary information. Database link P04626 |
| **Carrier free** | Yes |
| **Clone number** | ERB2/776 |
| **Purification technique** | Affinity purification Protein A/G |
| **Light chain type** | kappa |
| **Concentration** | 1 mg/mL The concentration of this product may be batch-dependent<br>Batch concentration finder → |
| **Purification notes** | purified from Bioreactor Concentrate. |

## Reactivity data

## ICC

**Tested**

| | |
|---|---|
| **Species** | Human |
| **Dilution info** | 1-2 µg/mL |
| **Notes** | - |

## Flow Cyt

**Tested**

| | |
|---|---|
| **Species** | Human |
| **Dilution info** | 1-2 µg for $10^6$ Cells |
| **Notes** | - |

## Target data

See full target information ERBB2

**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.

## Storage

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|---|---|
| **Shipped at conditions** | Blue Ice |
| **Appropriate short-term storage duration** | 1-2 weeks |
| **Appropriate short-term storage conditions** | +4°C |
| **Appropriate long-term storage conditions** | -20°C |

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|---|---|
| **Aliquoting information** | Upon delivery aliquot |
| **Storage information** | Avoid freeze / thaw cycle |

## Supplementary info

This supplementary information is collated from multiple sources and compiled automatically.

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|---|---|
| **Activity summary** | The ErbB2 also known as HER2 or HER2 protein is a transmembrane receptor protein with a molecular weight of about 185 kDa. It serves as part of the epidermal growth factor receptor (EGFR) family of receptor tyrosine kinases. The ErbB2 protein is expressed mainly in epithelial tissues including those of the breast and the gastrointestinal tract. It lacks a known ligand-binding domain which sets it apart from other members of its family. Due to its structure ErbB2 dimerizes with other members of the EGFR family to exert its effects in cellular signaling. |
| **Biological function summary** | The role of ErbB2 extends beyond a singular function. It becomes an active component when forming heterodimers with other EGFR family members such as ErbB3 to initiate various downstream signaling cascades. The dimerization activates intracellular pathways leading to cell proliferation survival differentiation and migration. Within cells ErbB2 influences processes critical for normal development and tissue homeostasis contributing significantly to signal transduction networks. |
| **Pathways** | ErbB2 plays a pivotal role in pathways such as the PI3K/Akt and MAPK/ERK pathways. These pathways are important in mediating cellular responses to growth signals. The PI3K/Akt pathway activated by HER2 signaling regulates cell growth and survival while the MAPK/ERK pathway contributes to cell differentiation and proliferation. ErbB2's interaction with proteins like ErbB3 is fundamental in these pathways increasing the amplitude and diversity of downstream signals. |
| **Associated diseases and disorders** | ErbB2 is significantly associated with breast cancer and gastric cancer. The overexpression or gene amplification of HER2 is observed in approximately 20% of breast cancer cases correlating with aggressive tumor growth and poor prognosis. ErbB2-related signaling contributes to oncogenic processes by promoting excessive cell proliferation. Targeting ErbB2 in these cancers is common using therapies such as monoclonal antibodies like trastuzumab. In the context of gastric cancer the role of ErbB2 mirrors its function in breast cancer and targeting HER2 holds therapeutic potential. |

## Product promise

**Tested**

We have tested this species and application combination and it works. It is covered by our product promise.

**Expected**

We have not tested this specific species and application combination in-house, but expect it will work. It is covered by our product promise.

**Predicted**

This species and application combination has not been tested, but we predict it will work based on strong homology. However, this combination is not covered by our product promise.

**Not recommended**

We do not recommend this combination. It is not covered by our product promise.

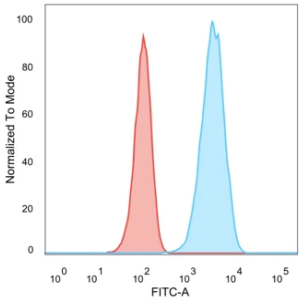
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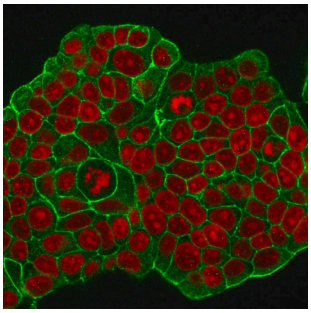
## 2 product images




### Flow Cytometry - Anti-ErbB2 / HER2 antibody [ERB2/776] - BSA and Azide free (ab212343)

ErbB2 / HER2 Flow Cytometry staining using mouse Anti-ErbB2 / HER2 antibody

Flow Cytometric analysis of human trypsinized MCF7 (human breast adenocarcinoma cell line) cells labeling ErbB2 / HER2 with ab212343 followed by Goat anti-Mouse IgG-CF488 (Blue); Isotype control (Red).



### Immunocytochemistry - Anti-ErbB2 / HER2 antibody [ERB2/776] - BSA and Azide free (ab212343)

ErbB2 / HER2 Immunocytochemistry staining using mouse Anti-ErbB2 / HER2 antibody

Immunofluorescent staining of MeOH-fixed MCF-7 cells labeling ErbB2 / HER2 with ab212343 followed by goat anti-Mouse IgG-CF488 (Green). Nuclei are stained with Reddot (Red).

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