abcam

ab314070

Anti-HER2/ErbB2 antibody [BLR241L] - BSA free

Recombinant

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	pH: 7.8 - 8.6 Preservative: 0.09% Sodium azide Constituents: 98% Borate buffered saline
Form	Liquid
Clonality	Monoclonal
Immunogen	Synthetic Peptide within Human ERBB2 aa 1200 to C-terminus. The exact immunogen used to generate this antibody is proprietary information. Database link P04626
Clone number	BLR241L
Concentration	1 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

Flow Cyt

Tested

Species	Human, Mouse
Dilution info	-
Notes	-

ICC

Tested

Species	Human
Dilution info	-
Notes	-

Expected

Species	Mouse
Dilution info	Use at an assay dependent concentration.
Notes	-

IHC-P

Tested

Species	Human
Dilution info	-
Notes	-

Expected

Species	Mouse
Dilution info	Use at an assay dependent concentration.
Notes	-

IP

Tested

Species	Human
Dilution info	-
Notes	-

Expected

Species	Mouse
Dilution info	Use at an assay dependent concentration.
Notes	-

WB

Tested

Species	Human, Mouse
Dilution info	-
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

Shipped at conditions	Blue Ice
Appropriate short-term storage duration	Up to 12 months
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	+4°C

Notes

REACH authorisation
Abcam has not and does not intend to apply for the REACH Authorisation of customers' uses of products that contain European Authorisation list (Annex XIV) substances.
It is the responsibility of our customers to check the necessity of application of REACH Authorisation, and any other relevant authorisations, for their intended uses.

Supplementary info

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

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

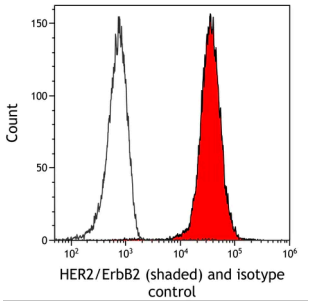
We do not recommend this combination. It is not covered by our product promise.

We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

In the unlikely event of one of our products not working as expected, you are covered by our product promise.

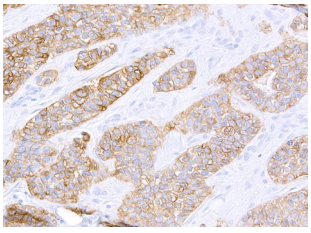
Full details and terms and conditions can be found here:
Terms & Conditions.

7 product images



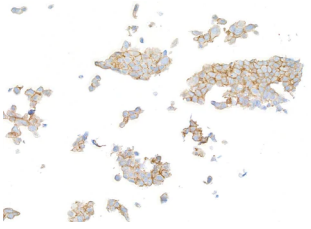
Flow Cytometry - Anti-HER2/ErbB2 antibody [BLR241L] - BSA free (ab314070)

Detection of human HER2/ErbB2 (shaded) in FaDu cells by flow cytometry. Antibody: Rabbit anti-HER2/ErbB2 recombinant monoclonal antibody [BLR241L] (A700-241) or isotype control (unshaded). Secondary: DyLight® 650-conjugated goat anti-rabbit IgG.



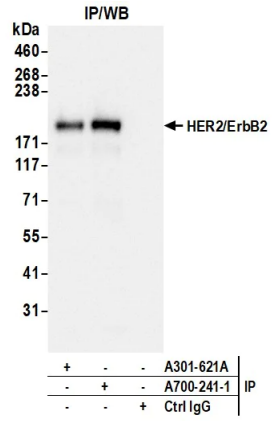
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-HER2/ErbB2 antibody [BLR241L] - BSA free (ab314070)

Sample: FFPE section of human breast carcinoma. Antibody: Rabbit anti-HER2/ErbB2 recombinant monoclonal antibody [BLR241L) (A700-241CF). Secondary: HRP-conjugated goat anti-rabbit IgG.



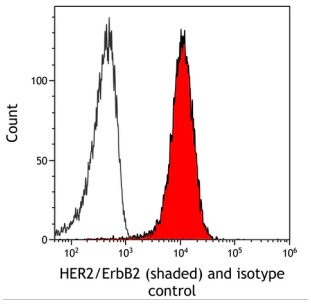
Immunocytochemistry - Anti-HER2/ErbB2 antibody [BLR241L] - BSA free (ab314070)

Sample: FFPE section of LNCaP cells. Antibody: Rabbit anti-HER2/ErbB2 recombinant monoclonal antibody [BLR241L) (A700-241CF). Secondary: HRP-conjugated goat anti-rabbit IgG .



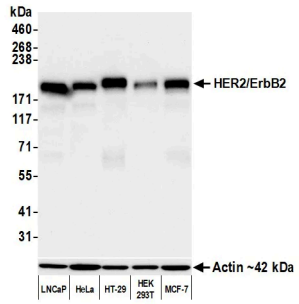
Immunoprecipitation - Anti-HER2/ErbB2 antibody [BLR241L] - BSA free (ab314070)

Samples: Whole cell lysate (1.0 mg per IP reaction; 20% of IP loaded) from HeLa cells prepared using NETN lysis buffer. Antibodies: Rabbit anti-HER2/ErbB2 recombinant monoclonal antibody [BLR241L] (A700-241-1) used for IP at 20 µl/mg lysate. HER2/ErbB2 was also immunoprecipitated by a second antibody against a different epitope of HER2/ErbB2 (A301-621A). For blotting immunoprecipitated HER2/ErbB2, A700-241 was used at 1:1000. Detection: Chemiluminescence with an exposure time of 1 second.
All lanes:
Immunoprecipitation - Anti-HER2/ErbB2 antibody [BLR241L] - BSA free (ab314070)



Flow Cytometry - Anti-HER2/ErbB2 antibody [BLR241L] - BSA free (ab314070)

Detection of mouse HER2/ErbB2 (shaded) in NIH3T3 cells by flow cytometry. Antibody: Rabbit anti-HER2/ErbB2 recombinant monoclonal antibody [BLR241L] (A700-241CF) or isotype control (unshaded). Secondary: DyLight® 650-conjugated goat anti-rabbit IgG.



Western blot - Anti-HER2/ErbB2 antibody [BLR241L] - BSA free (ab314070)

Samples: Whole cell lysate (10 µg) from LNCaP, HeLa, HT-29, HEK293T, and MCF-7 cells prepared using NETN lysis buffer. Antibody: Rabbit anti-HER2/ErbB2 recombinant monoclonal antibody [BLR241L] (A700-241) used at 1:1000. Secondary: HRP-conjugated goat anti-rabbit IgG. Detection: Chemiluminescence with an exposure time of 10 seconds. Lower Panel: Rabbit anti-Actin recombinant monoclonal antibody [BLR057F].
All lanes:
Western blot - Anti-HER2/ErbB2 antibody [BLR241L] - BSA free (ab314070) at 1/1000 dilution

Lane 1:
LNCaP Whole cell lysate at 10 µg

Lane 2:
HeLa Whole cell lysate at 10 µg

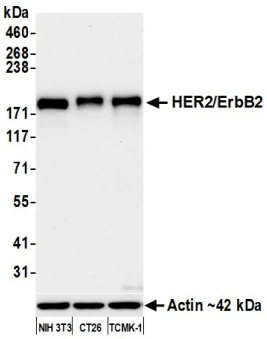
Lane 3:
HT-29 Whole cell lysate at 10 µg

Lane 4:
HEK293T Whole cell lysate at 10 µg

Lane 5:
MCF-7 Whole cell lysate at 10 µg

Secondary

All lanes:
HRP-conjugated goat anti-rabbit IgG



Western blot - Anti-HER2/ErbB2 antibody [BLR241L] - BSA free (ab314070)

Samples: Whole cell lysate (10 µg) from NIH 3T3, CT26, and TCMK-1 cells prepared using NETN lysis buffer. Antibody: Rabbit anti-HER2/ErbB2 recombinant monoclonal antibody [BLR241L] (A700-241) used at 1:1000. Secondary: HRP-conjugated goat anti-rabbit IgG. Detection: Chemiluminescence with an exposure time of 30 seconds. Lower Panel: Rabbit anti-Actin recombinant monoclonal antibody [BLR057F].
All lanes:
Western blot - Anti-HER2/ErbB2 antibody [BLR241L] - BSA free (ab314070) at 1/1000 dilution

Lane 1:
NIH 3T3 Whole cell lysate at 10 µg

Lane 2:
CT26 Whole cell lysate at 10 µg

Lane 3:
TCMK-1 Whole cell lysate at 10 µg

Secondary

All lanes:
HRP-conjugated goat anti-rabbit IgG

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.