abcam

ab236220

Anti-ErbB3 / HER3 antibody [SP71] - BSA and Azide free

Recombinant | RabMAb | Advanced Validation

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	pH: 7.2 - 7.4 Constituents: PBS
Form	Liquid
Clonality	Monoclonal
Immunogen	The exact immunogen used to generate this antibody is proprietary information.
Carrier free	Yes
Clone number	SP71
Purification technique	Affinity purification Protein A/G
Concentration	1.016 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →
Purification notes	Purified from TCS by protein A/G.

Reactivity data

mIHC

Tested

Species	Human

Dilution info	-
Notes	-

IHC-P

Tested

Species	Human
Dilution info	-
Notes	1/100 for 30 mins at RT. Perform heat mediated antigen retrieval before commencing with IHC staining protocol by boiling tissue section in 1mM EDTA, pH 8.0 for 10 min followed by cooling at RT for 20 min.

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	1/50
Notes	-

Target data

See full target information ERBB3

Function	Tyrosine-protein kinase that plays an essential role as cell surface receptor for neuregulins. Binds to neuregulin-1 (NRG1) and is activated by it; ligand-binding increases phosphorylation on tyrosine residues and promotes its association with the p85 subunit of phosphatidylinositol 3-kinase (PubMed:20682778). May also be activated by CSPG5 (PubMed:15358134). Involved in the regulation of myeloid cell differentiation (PubMed:27416908).

Storage

Shipped at conditions	Blue Ice
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	+4°C

Storage information	Do Not Freeze

Notes

ab236220 is the carrier-free version of ab93739.
What are the advantages of a recombinant monoclonal antibody?
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 batch production

For more information, read more on recombinant antibodies.

Conjugation ready
Our carrier-free antibodies are typically supplied in a PBS-only formulation, purified and free of BSA, sodium azide and glycerol. This conjugation-ready format is designed for use with fluorochromes, metal isotopes, oligonucleotides, and enzymes, which makes them ideal for antibody labelling, functional and cell-based assays, flow-based assays (e.g. mass cytometry) and Multiplex Imaging applications.

Use our conjugation kits for antibody conjugates that are ready-to-use in as little as 20 minutes with 1 minute hands-on-time and 100% antibody recovery: available for fluorescent dyes, HRP, biotin and gold.

Compatibility
This product is compatible with the Maxpar® Antibody Labeling Kit from Fluidigm, without the need for antibody preparation. Maxpar® is a trademark of Fluidigm Canada Inc.

Supplementary info

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

Activity summary	The ErbB3 protein also known as HER3 is a member of the epidermal growth factor receptor (EGFR) family. It belongs to the ErbB receptor tyrosine kinase family but lacks intrinsic kinase activity. The HER3 protein has a molecular weight of approximately 180 kDa. You will find HER3 expressed in various tissues with high expression in the epithelial tissues where it plays a role in normal cellular processes. HER3 interacts with multiple ligands facilitating cellular communication and growth regulation.
Biological function summary	HER3 is essential for activating important signaling pathways that regulate proliferation differentiation and survival. The ErbB3 protein forms heterodimers with other ErbB family members such as ErbB2 (HER2) which is necessary for its signaling capability. The HER3 protein is abundant in heart and nervous tissues indicating its role in cardiovascular and neurological functions. Its activation modulates gene expression through downstream effectors mediated by dimerization.
Pathways	HER3 plays a pivotal role in the PI3K/Akt and MAPK signaling pathways. These pathways are fundamental in cellular responses like growth and survival. HER3 serves as a major partner for HER2 in these signaling cascades enhancing

	downstream signaling effects. HER3's connection to these pathways makes it a critical node collaborating closely with proteins such as HER2 and EGFR to maintain efficient communication and function within these networks.
Associated diseases and disorders	HER3 associates strongly with cancer and cardiovascular diseases. Its overexpression in certain cancers such as breast cancer leads to enhanced tumor growth and resistance to therapy. HER3's relationship with the HER2 protein is especially significant in HER2-positive breast cancer where their interaction drives tumor progression. Additionally alterations in HER3 expression or function impact cardiovascular diseases as it plays a significant role in heart and vascular cell behavior. Recognizing HER3's involvement in these conditions allows for targeted therapeutic approaches and improves disease management strategies.

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

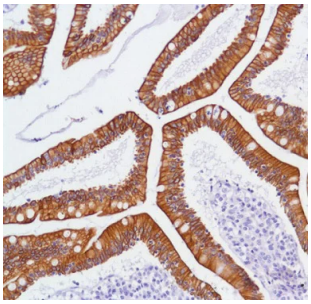
We do not recommend this combination. It is not covered by our product promise.

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.

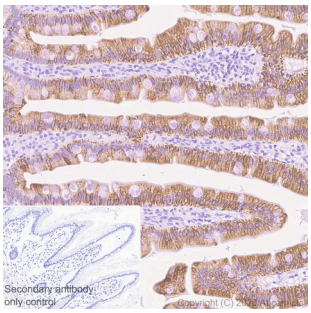
6 product images



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-ErbB3 / HER3 antibody [SP71] - BSA and Azide free (ab236220)

ErbB3 / HER3 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-ErbB3 / HER3 antibody

Formalin-fixed, paraffin-embedded human small intestine tissue stained for ErbB3 / HER3 using ab93739 at 1/100 dilution in immunohistochemical analysis.
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab93739).



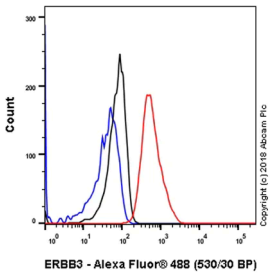
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-ErbB3 / HER3 antibody [SP71] - BSA and Azide free (ab236220)

ErbB3 / HER3 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-ErbB3 / HER3 antibody

This data was developed using ab93739, the same antibody clone in a different buffer formulation. Membranous staining on paraffin-embedded sections of human small intestine. The section was incubated with ab93739 at 1:100 dilution (0.7 µg/ml) for 30 mins at room temperature. The secondary antibody staining was achieved with Rabbit specific IHC polymer detection kit HRP/DAB (ab209101). Hematoxylin was used as a counter stain.

Heat mediated antigen retrieval was performed with Citrate buffer (pH 6.0, epitope retrieval solution1) for 20 mins.

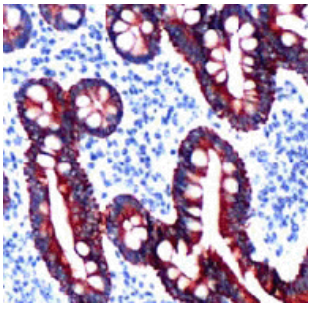
The immunostaining was performed on a Leica Biosystems BOND® RX instrument.



Flow Cytometry (Intracellular) - Anti-ErbB3 / HER3 antibody [SP71] - BSA and Azide free (ab236220)

ErbB3 / HER3 Flow Cytometry (Intracellular) staining using rabbit Anti-ErbB3 / HER3 antibody

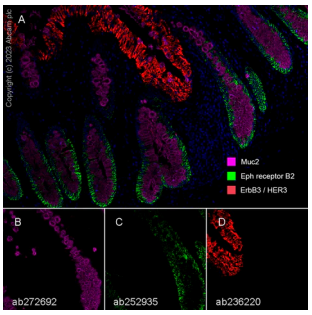
Intracellular Flow Cytometry analysis of MCF7 (human breast adenocarcinoma epithelial cell) labeling ErbB3 / HER3 with purified ab93739 at 1/50 dilution (10.5µg/ml) (red). Cells were fixed with 4% paraformaldehyde and permeabilised with 90% methanol. Goat anti rabbit IgG (Alexa Fluor® 488, ab150077) at 1/2000 dilution was used as a secondary antibody. Isotype control -Rabbit monoclonal IgG (ab172730) / Black. Unlabeled control -Unlabelled cells / blue. This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab93739).



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-ErbB3 / HER3 antibody [SP71] - BSA and Azide free (ab236220)

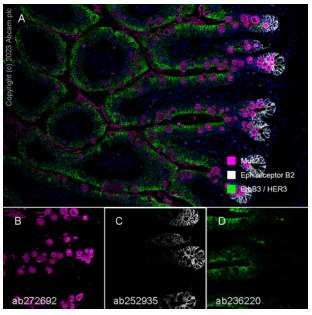
ErbB3 / HER3 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-ErbB3 / HER3 antibody

ab93739 at 1/100 dilution staining ErbB3 / HER3 in formalin-fixed, paraffin-embedded Human small intestine tissue.
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab93739).



Multiplex immunohistochemistry - Anti-ErbB3 / HER3 antibody [SP71] - BSA and Azide free (ab236220)

Fluorescence multiplex immunohistochemical analysis of the human colon (Formalin/PFA-fixed paraffin-embedded sections). Panel A: merged staining of anti-Muc2 (ab272692, magenta; Opal™690), anti-Eph receptor B2 (ab252935, green; Opal™520) and anti-ErbB3 / HER3 (ab236220, red; Opal™570) on human colon. Panel B: anti-Muc2 stained on goblet cells. Panel C: anti-Eph receptor B2 stained on intestinal stem and progenitor cells. Panel D: anti-ErbB3 / HER3 stained on epithelial cells. Opal Polymer HRP Ms + Rb was used as a secondary antibody. The section was incubated in three rounds of staining: in the order of ab272692 at 1/2000 dilution (0.252 µg/ml), ab252935 at 1/1000 dilution (0.527 µg/ml), and ab236220 at 1/3000 dilution (0.75 µg/ml) for 30 mins at room temperature. Each round was followed by a separate fluorescent tyramide signal amplification system. The immunostaining was performed on a Leica Biosystems BOND® RX instrument with an Opal™ 4-color kit. Image acquisition was performed with Leica SP8 confocal microscope. Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0, epitope retrieval solution2) for 20 mins. DAPI (blue) was used as a nuclear counter stain.



Multiplex immunohistochemistry - Anti-ErbB3 / HER3 antibody [SP71] - BSA and Azide free (ab236220)

Fluorescence multiplex immunohistochemical analysis of the human jejunum (Formalin/PFA-fixed paraffin-embedded sections). Panel A: merged staining of anti-Muc2 (ab272692, magenta; Opal™690), anti-Eph receptor B2 (ab252935, green; Opal™520) and anti-ErbB3 / HER3 (ab236220, red; Opal™570) on human jejunum. Panel B: anti-Muc2 stained on goblet cells. Panel C: anti-Eph receptor B2 stained on intestinal stem and progenitor cells. Panel D: anti-ErbB3 / HER3 stained on epithelial cells. Opal Polymer HRP Ms + Rb was used as a secondary antibody. The section was incubated in three rounds of staining: in the order of ab272692 at 1/2000 dilution (0.252 µg/ml), ab252935 at 1/1000 dilution (0.527 µg/ml), and ab236220 at 1/3000 dilution (0.75 µg/ml) for 30 mins at room temperature. Each round was followed by a separate fluorescent tyramide signal amplification system. The immunostaining was performed on a Leica Biosystems BOND® RX instrument with an Opal™ 4-color kit. Image acquisition was performed with Leica SP8 confocal microscope. Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0, epitope retrieval solution2) for 20 mins. DAPI (blue) was used as a nuclear counter stain.

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