abcam

ab255607

Anti-ErbB3 / HER3 antibody [EPR22669-25]

Anti-ErbB3 / HER3 antibody [EPR22669-25] (ab255607) is a rabbit monoclonal antibody detecting ErbB3 / HER3 in **Western Blot, Flow Cytometry (Intra), IHC-P**. Suitable for **Human, Mouse**.

- Biophysical QC for unrivalled batch-batch consistency

Recombinant | RabMAb | KO Validated | 20ul selling size

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	pH: 7.2 - 7.4 Preservative: 0.01% Sodium azide Constituents: PBS, 40% Glycerol (glycerin, glycerine), 0.05% BSA
Form	Liquid
Clonality	Monoclonal
Immunogen	The exact immunogen used to generate this antibody is proprietary information.
Clone number	EPR22669-25
Purification technique	Affinity purification Protein A
Concentration	0.504 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

IP

Not recommended

Species	Human, Mouse
Dilution info	-

Notes	-

WB

Tested

Species	Mouse
Dilution info	1/1000
Notes	**Fresh lysates are needed for western blot.**

Species	Human
Dilution info	1/1000
Notes	**Fresh lysates are needed for western blot.**

ICC/IF

Not recommended

Species	Human, Mouse
Dilution info	-
Notes	-

IHC-Fr

Not recommended

Species	Mouse, Human
Dilution info	-
Notes	-

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	1/50
Notes	-

Expected

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

IHC-P

Tested

Species	Mouse
Dilution info	1/250
Notes	-

Species	Human
Dilution info	1/250
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	Conditional Ambient
Appropriate short-term storage duration	1-2 weeks
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	-20°C

Aliquoting information	Upon delivery aliquot
Storage information	Avoid freeze / thaw cycle

Notes

What is this antibody validated in?
Anti-ErbB3 / HER3 antibody [EPR22669-25] (ab255607) is a rabbit recombinant monoclonal antibody and is validated for use in Western Blot (WB), Flow Cytometry (Intra), Immunohistochemistry (IHC-P) in Human, Mouse samples.

What is the molecular weight of ErbB3 / HER3?
Anti-ErbB3 / HER3 [EPR22669-25] (ab255607) specifically detects a band for ErbB3 / HER3 (UniProt: P21860) at a molecular weight of 148kDa.

Other related products
We have a range of other formats of antibody clone [EPR22669-25] also available for your convenience: ab255607, Carrier free - ab256504, Alexa Fluor® 488 - ab322172, ab324261

Patented technology
Our RabMAb® technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to RabMAb® patents.

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.

Trial sizes available!
Test your antibody or perform pre-screening before committing to a larger quantity. Sold in 20µl. Discover our selection of trial-size antibodies.

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

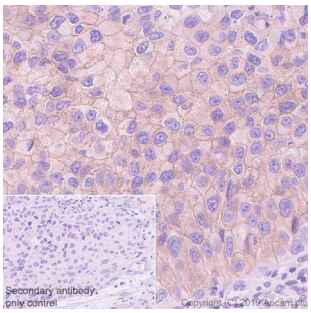
We do not recommend this combination. It is not covered by our product promise.

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.

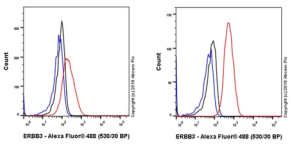
8 product images



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-ErbB3 / HER3 antibody [EPR22669-25] (ab255607)

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

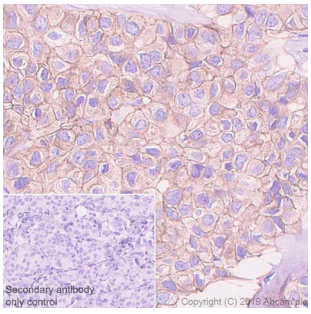
Immunohistochemical analysis of paraffin-embedded human bladder cancer tissue labeling ErbB3 / HER3 with ab255607 at 1/250 dilution (2.1 µg/ml) followed by a ready to use Goat Anti-Rabbit IgG H&L (HRP). Membranous staining in human urothelial carcinoma (PMID: 23333248) is observed. Counterstained with hematoxylin. Heat mediated antigen retrieval using ab93684 (Tris/EDTA buffer, pH 9.0).
Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is a ready to use Goat Anti-Rabbit IgG H&L (HRP).



Flow Cytometry (Intracellular) - Anti-ErbB3 / HER3 antibody [EPR22669-25] (ab255607)

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

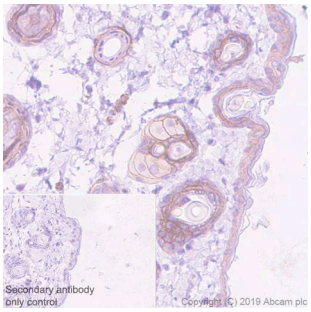
Intracellular flow cytometric analysis of 4% paraformaldehydefixed 90% methanolpermeabilized MDA-MB-231 (Human breast adenocarcinoma epithelial cell, Left) / MCF7 (Human breast adenocarcinoma epithelial cell, Right) cells labeling ErbB3 / HER3 with ab255607 at 1/50 dilution (1µg)/ Red compared with a Rabbit monoclonal IgG (ab172730) / Black isotype control and an unlabeled control (cells without incubation with primary antibody and secondary antibody) (Blue). A Goat anti rabbit IgG (Alexa Fluor® 488, ab150077) at 1/2000 dilution was used as the secondary antibody. **Weak expression control:** MDA-MB-231 (PMID: 25018110, 16519802).



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-ErbB3 / HER3 antibody [EPR22669-25] (ab255607)

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

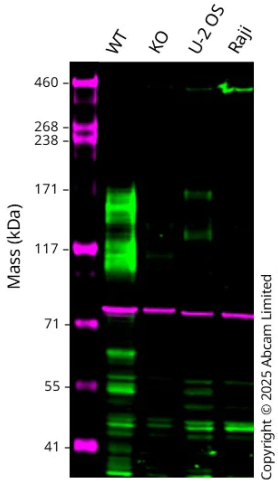
Immunohistochemical analysis of paraffin-embedded human breast cancer tissue labeling ErbB3 / HER3 with ab255607 at 1/250 dilution (2.1 µg/ml) followed by a Goat Anti-Rabbit IgG H&L (HRP) ready to use. Membranous staining in human breast carcinoma (PMID: 24346286) is observed. Counterstained with hematoxylin. Heat mediated antigen retrieval using ab93684 (Tris/EDTA buffer, pH 9.0).
Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is a ready to use Goat Anti-Rabbit IgG H&L (HRP).



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-ErbB3 / HER3 antibody [EPR22669-25] (ab255607)

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

Immunohistochemical analysis of paraffin-embedded mouse skin tissue labeling ErbB3 / HER3 with ab255607 at 1/250 dilution (2.1 µg/ml) followed by a Goat Anti-Rabbit IgG H&L (HRP) ready to use. Membranous staining in mouse skin (PMID:26194695) is observed. Counterstained with hematoxylin. Heat mediated antigen retrieval using ab93684 (Tris/EDTA buffer, pH 9.0).
Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is Goat Anti-Rabbit IgG H&L (HRP) ready to use.



Western blot - Anti-ErbB3 / HER3 antibody [EPR22669-25] (ab255607)

ErbB3 / HER3 Western blot staining using rabbit Anti-ErbB3 / HER3 antibody

Western blot: Anti-ErbB3 / HER3 antibody [EPR22669-25] ab255607 staining at 1/1000 dilution, shown in green; Mouse anti-CANX (ab238078) loading control staining at 1/20,000 dilution, shown in magenta. A band was observed at 90-175 kDa in Wild-type MCF7 UNBOILED cell lysates with no signal observed at this size in ERBB3 knockout MCF7 UNBOILED cell line. To generate this image, samples were run on an SDS-PAGE gel then transferred onto a nitrocellulose membrane. Membranes were blocked in 5pc BSA in TBS-0.1 % Tween® 20 (TBS-T) before incubation with primary antibodies overnight at 4 °C. Blots were washed four times in TBS-T, incubated with secondary antibodies for 1 h at room temperature, washed again four times then imaged. Secondary antibodies used were Goat anti-Rabbit 800CW & Goat anti-Mouse 680RD at 1/20,000 dilution.
All lanes:
Western blot - Anti-ErbB3 / HER3 antibody [EPR22669-25] (ab255607) at 1/1000 dilution

Lane 1:
Wild-type MCF7 UNBOILED at 20 µg

Lane 2:
Western blot - Human ERBB3 knockout MCF7 cell line (ab286320) at 20 µg

Lane 3:
U-2 OS UNBOILED at 20 µg

Lane 4:
Raji UNBOILED at 20 µg

Secondary

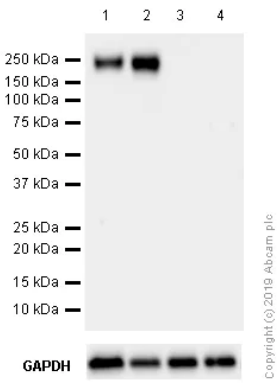
Lanes 1 - 4:
Goat anti-Rabbit 800CW at 1/20000 dilution

Lanes 1 - 4:
Goat anti-Mouse 680RD at 1/20000 dilution

Performed under reducing conditions.

Predicted band size: 148 kDa, 185 kDa

Observed band size: 90-175 kDa, 76 kDa



Western blot - Anti-ErbB3 / HER3 antibody [EPR22669-25] (ab255607)

ErbB3 / HER3 Western blot staining using rabbit Anti-ErbB3 / HER3 antibody

Fresh lysates are needed for western blot.
ErbB 3 low expression cell lines: HeLa, MDA-MB-231 (PMID: 22436610, 22301547).

Blocking/Dilution buffer: 5% NFDM/TBST.

All lanes:
Western blot - Anti-ErbB3 / HER3 antibody [EPR22669-25] (ab255607) at 1/1000 dilution

Lane 1:
MCF7 (Human breast adenocarcinoma epithelial cell) whole cell lysate at 20 µg

Lane 2:
T-47D (Human ductal breast epithelial tumor epithelial cell) whole cell lysate at 20 µg

Lane 3:
HeLa (Human cervix adenocarcinoma epithelial cell) whole cell lysate at 20 µg

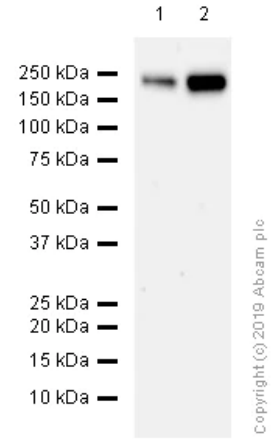
Lane 4:
MDA-MB-231 (Human breast adenocarcinoma epithelial cell) whole cell lysate at 20 µg

Secondary

All lanes:
Western blot - Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/100000 dilution

Predicted band size: 148 kDa

Exposure time: 26s



Western blot - Anti-ErbB3 / HER3 antibody [EPR22669-25] (ab255607)

ErbB3 / HER3 Western blot staining using rabbit Anti-ErbB3 / HER3 antibody

Blocking/Dilution buffer: 5% NFDM/TBST.
All lanes:
Western blot - Anti-ErbB3 / HER3 antibody [EPR22669-25] (ab255607) at 1/1000 dilution

Lane 1:
4T1 (Mouse mammary gland carcinoma epithelial cell) whole cell lysate at 20 µg

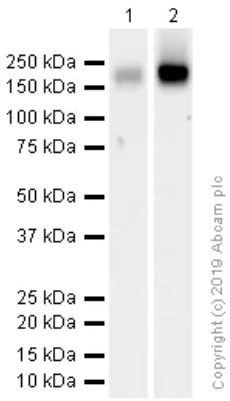
Lane 2:
SK-BR-3 (Human breast adenocarcinoma epithelial cell) whole cell lysate at 20 µg

Secondary

All lanes:
Western blot - Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/100000 dilution

Predicted band size: 148 kDa

Exposure time: 3min



Western blot - Anti-ErbB3 / HER3 antibody [EPR22669-25] (ab255607)

ErbB3 / HER3 Western blot staining using rabbit Anti-ErbB3 / HER3 antibody

The expression profile/molecular weight observed is consistent with what has been described in the literature. PMID: 26194695 and 19690388.
Blocking/Dilution buffer: 5% NFDM/TBST.

All lanes:
Western blot - Anti-ErbB3 / HER3 antibody [EPR22669-25] (ab255607) at 1/1000 dilution

Lane 1:
Mouse stomach lysate at 20 µg

Lane 2:
Mouse skin lysate at 20 µg

Secondary

All lanes:
Western blot - Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/20000 dilution

Predicted band size: 148 kDa

Exposure time: 70s

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