




Anti-ErbB4 / HER4 antibody [HFR-1] ab19391

★★★★★ **3 Abreviews** **15 References** **12 图像**

概述

产品名称	Anti-ErbB4 / HER4抗体[HFR-1]
描述	小鼠单克隆抗体[HFR-1] to ErbB4 / HER4
宿主	Mouse
经测试应用	适用于: Flow Cyt, WB, ICC, IHC-P
种属反应性	与反应: Mouse, Human 预测可用于: Rat, Chicken 
免疫原	Synthetic peptide within ErbB4/ HER4 aa 1250-1350. The exact immunogen sequence used to generate this antibody is proprietary information. If additional detail on the immunogen is needed to determine the suitability of the antibody for your needs, please <u>contact</u> our Scientific Support team to discuss your requirements. <div>  <u>Run BLAST with</u>  <u>Run BLAST with</u> </div>
阳性对照	WB: MDA-MB-453 and T47D cell lysates; ICC: SK-BR-3, A431, and NIH/3T3 cells; IHC-P: Human pancreas, heart, breast carcinoma, and mouse placenta tissues; Flow Cyt: HeLa, MCF7, and NIH/3T3 cells.
常规说明	<p>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.</p> <p>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</p>

性能

形式	Liquid
存放说明	Shipped at 4°C. Upon delivery aliquot and store at -20°C. Avoid freeze / thaw cycles.
存储溶液	Preservative: 0.05% Sodium azide Constituents: PBS, 0.1% BSA
纯度	Protein A purified
克隆	单克隆
克隆编号	HFR-1

同种型

lgG2b

应用

The Abpromise guarantee

Abpromise™承诺保证使用ab19391于以下的经测试应用

“应用说明”部分 下显示的仅为推荐的起始稀释度;实际最佳的稀释度/浓度应由使用者检定。

应用	Ab评论	说明
Flow Cyt		Use 2µg for 10 ⁶ cells. ab170192 - Mouse monoclonal IgG2b, is suitable for use as an isotype control with this antibody.
WB		1/100 - 1/500. Predicted molecular weight: 147 kDa.
ICC		1/50.
IHC-P		Use a concentration of 6 - 8 µg/ml.

靶标

功能

Specifically binds and is activated by neuregulins, NRG-2, NRG-3, heparin-binding EGF-like growth factor, betacellulin and NTAK. Interaction with these factors induces cell differentiation. Not activated by EGF, TGF-A, and amphiregulin. The C-terminal fragment (CTF) of isoform JMA-A CYT-2 (containing E4ICD2) can stimulate transcription in the presence of YAP1. ERBB4 intracellular domain is involved in the regulation of cell growth. Conflicting reports are likely due at least in part to the opposing effects of the isoform-specific and nuclear-translocated ERBB4 intracellular domains (E4ICD1 and E4ICD2). Overexpression studies in epithelium show growth inhibition using E4ICD1 and increased proliferation using E4ICD2. E4ICD2 has greater in vitro kinase activity than E4ICD1. The kinase activity is required for the nuclear translocation of E4ICD2.

组织特异性

Expressed at highest levels in brain, heart, kidney, in addition to skeletal muscle, parathyroid, cerebellum, pituitary, spleen, testis and breast. Lower levels in thymus, lung, salivary gland, and pancreas. Isoform JM-A CYT-1 and isoform JM-B CYT-1 are expressed in cerebellum, but only the isoform JM-B is expressed in the heart.

序列相似性

Belongs to the protein kinase superfamily. Tyr protein kinase family. EGF receptor subfamily. Contains 1 protein kinase domain.

翻译后修饰

Isoform JM-A CYT-1 and isoform JM-A CYT-2 but not isoform JM-B CYT-1 and isoform JM-B CYT-2 are processed by ADAM17. Proteolytic processing in response to ligand or 12-O-tetradecanoylphorbol-13-acetate stimulation results in the production of 120 kDa soluble receptor forms and intermediate membrane-anchored 80 kDa fragments (m80HER4), which are further processed by a presenilin-dependent gamma-secretase to release the respective cytoplasmic intracellular domain E4ICD (either E4ICD1/s80Cyt1 or E4ICD2/s80Cyt2). Membrane-anchored 80 kDa fragments of the processed isoform JM-A CYT-1 are more readily degraded by the proteasome than fragments of isoform JM-A CYT-2 suggesting a prevalence of E4ICD2 over E4ICD1.

Ligand-binding increases phosphorylation on tyrosine residues. Isoform JM-A CYT-2 is constitutively phosphorylated on tyrosine residues in a ligand-independent manner. E4ICD2 but

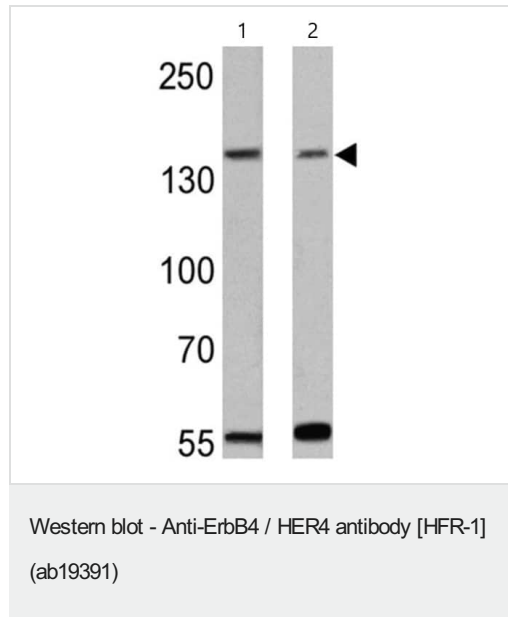
not E4ICD1 is phosphorylated on tyrosine residues.

Ubiquitinated. The ERBB4 intracellular domain is ubiquitinated and targeted to proteosomal degradation during mitosis mediated by the APC/C complex. Isoform JM-A CYT-1 and isoform JM-B CYT-1 are ubiquitinated by WWP1. The ERBB4 intracellular domain (E4ICD1) is ubiquitinated, and this involves NEDD4.

细胞定位

Membrane and Nucleus. Following proteolytical processing E4ICD (E4ICD1 or E4ICD2 generated from the respective isoforms) is translocated to the nucleus. Significantly more E4ICD2 than E4ICD1 is found in the nucleus. E4ICD2 colocalizes with YAP1 in the nucleus.

图片



All lanes : Anti-ErbB4 / HER4 antibody [HFR-1] (ab19391) at 1/300 dilution

Lane 1 : MDA-MB-453 (human ductal carcinoma cell line) cell lysate

Lane 2 : T-47D (human ductal breast epithelial tumor cell line) cell lysate

Lysates/proteins at 25 µg per lane.

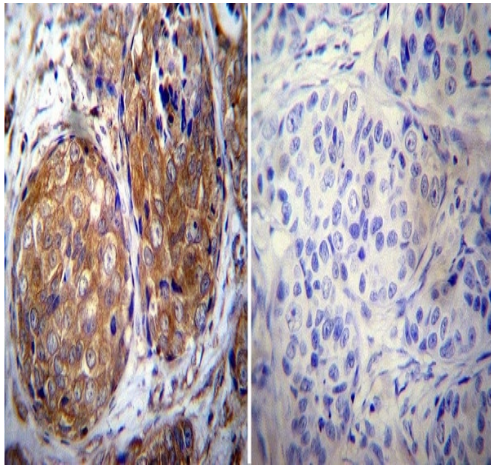
Secondary

All lanes : Goat anti-mouse IgG + IgM (H+L) (HRP)

Developed using the ECL technique.

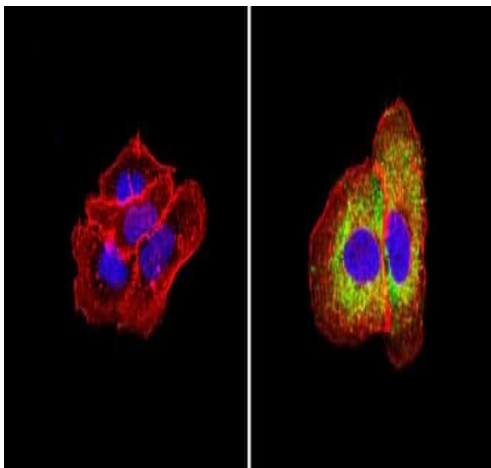
Predicted band size: 147 kDa

Observed band size: 185 kDa



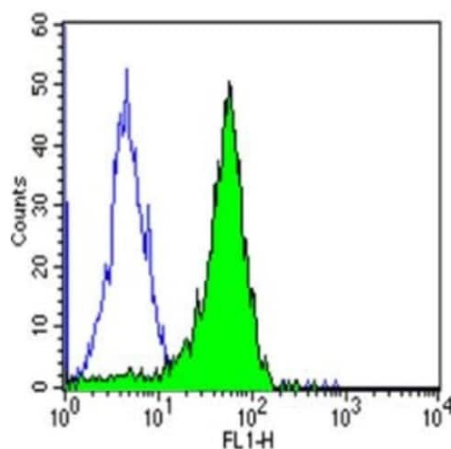
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-ErbB4 / HER4 antibody [HFR-1] (ab19391)

Immunohistochemistry was performed on both normal and cancer biopsies of deparaffinized Human Breast carcinoma tissue. To expose target proteins, heat induced antigen retrieval was performed using 10mM sodium citrate (pH6.0) buffer, microwaved for 8-15 minutes. Following antigen retrieval tissues were blocked in 3% BSA-PBS for 30 minutes at room temperature. Tissues were then probed at a dilution of 1:20 with a mouse monoclonal antibody recognizing ErbB4 / HER4 (ab19391) or without primary antibody (negative control) overnight at 4°C in a humidified chamber. Tissues were washed extensively with PBST and endogenous peroxidase activity was quenched with a peroxidase suppressor. Detection was performed using a biotin-conjugated secondary antibody and SA-HRP, followed by colorimetric detection using DAB. Tissues were counterstained with hematoxylin and prepped for mounting.



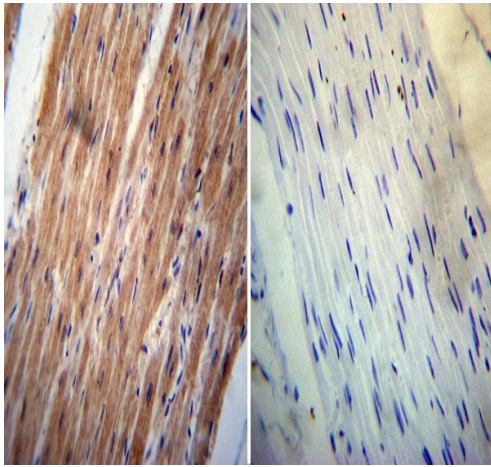
Immunocytochemistry - Anti-ErbB4 / HER4 antibody [HFR-1] (ab19391)

Immunocytochemistry analysis of A431 (human epidermoid carcinoma cell line) cells labeling ErbB4 / HER4 with ab19391 at 1/50 dilution (right) compared to a negative control without primary antibody (left). Cells were fixed with formalin and permeabilized with 0.1% Triton X-100 in TBS for 5-10 minutes and blocked with 3% BSA-PBS for 30 minutes at room temperature. Cells were incubated with a DyLight[®] conjugated secondary antibody (green). Cells were counterstained with Anti-Actin antibody (Alexa Fluor[®] 554) (red). Nuclear DNA was labelled with DAPI (blue).



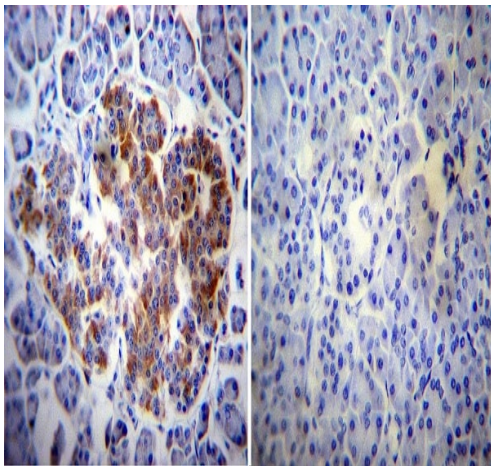
Flow Cytometry - Anti-ErbB4 / HER4 antibody [HFR-1] (ab19391)

Flow cytometry analysis of NIH/3T3 (mouse embryo fibroblast cell line) cells labeling ErbB4 / HER4 with ab19391 (green) compared to an isotype control (blue). Cells were harvested, adjusted to a concentration of $1-5 \times 10^6$ cells/mL, fixed with 2% paraformaldehyde and washed with PBS. Cells were blocked with a 2% solution of BSA-PBS for 30 min at room temperature and incubated with ab19391 at a dilution of 0.5 µg/test for 40 min at room temperature. Cells were then incubated for 40 min at room temperature in the dark using a DyLight[®] 488-conjugated secondary antibody and re-suspended in PBS for FACS analysis.



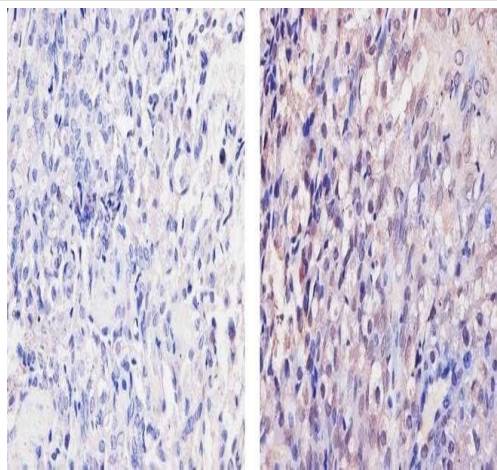
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-ErbB4 / HER4 antibody [HFR-1] (ab19391)

Immunohistochemistry was performed on both normal and cancer biopsies of deparaffinized human Heart tissue. To expose target proteins, heat induced antigen retrieval was performed using 10mM sodium citrate (pH6.0) buffer, microwaved for 8-15 minutes. Following antigen retrieval tissues were blocked in 3% BSA-PBS for 30 minutes at room temperature. Tissues were then probed at a dilution of 1:200 with a mouse monoclonal antibody recognizing ErbB4 (ab19391) or without primary antibody (negative control) overnight at 4°C in a humidified chamber. Tissues were washed extensively with PBST and endogenous peroxidase activity was quenched with a peroxidase suppressor. Detection was performed using a biotin-conjugated secondary antibody and SA-HRP, followed by colorimetric detection using DAB. Tissues were counterstained with hematoxylin and prepped for mounting.



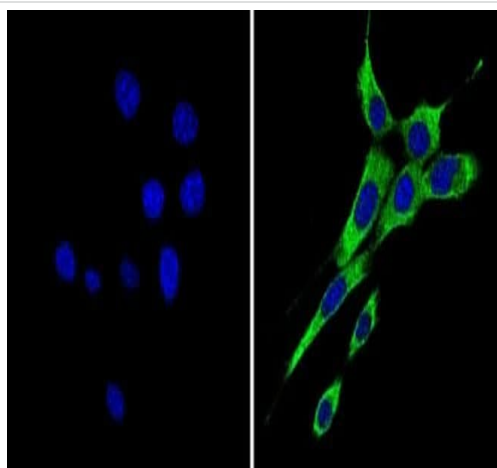
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-ErbB4 / HER4 antibody [HFR-1] (ab19391)

Immunohistochemistry was performed on both normal and cancer biopsies of deparaffinized Human Pancreas tissue. To expose target proteins, heat induced antigen retrieval was performed using 10mM sodium citrate (pH6.0) buffer, microwaved for 8-15 minutes. Following antigen retrieval tissues were blocked in 3% BSA-PBS for 30 minutes at room temperature. Tissues were then probed at a dilution of 1:200 with a mouse monoclonal antibody recognizing ErbB4 / HER4 (**ab193911**) or without primary antibody (negative control) overnight at 4°C in a humidified chamber. Tissues were washed extensively with PBST and endogenous peroxidase activity was quenched with a peroxidase suppressor. Detection was performed using a biotin-conjugated secondary antibody and SA-HRP, followed by colorimetric detection using DAB. Tissues were counterstained with hematoxylin and prepped for mounting.



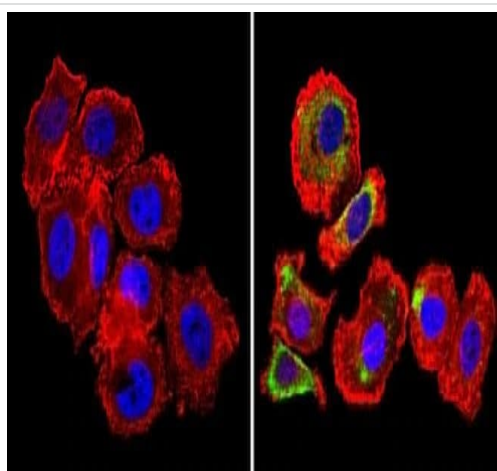
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-ErbB4 / HER4 antibody [HFR-1] (ab19391)

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of mouse placenta tissue labeling ErbB4 / HER4 with ab19391 at 1/100 dilution (right) compared to a negative control without primary antibody (left). To expose target proteins, antigen retrieval was performed using 10mM sodium citrate (pH 6.0), microwaved for 8-15 min. Following antigen retrieval, tissues were blocked in 3% H₂O₂-methanol for 15 min at room temperature, washed with ddH₂O and PBS, and then probed with ab19391 diluted in 3% BSA-PBS at a dilution of 1:100 for 1 hour at 37°C in a humidified chamber. Tissues were washed extensively in PBST and detection was performed using an HRP-conjugated secondary antibody followed by colorimetric detection using a DAB kit. Tissues were counterstained with hematoxylin and dehydrated with ethanol and xylene to prep for mounting.



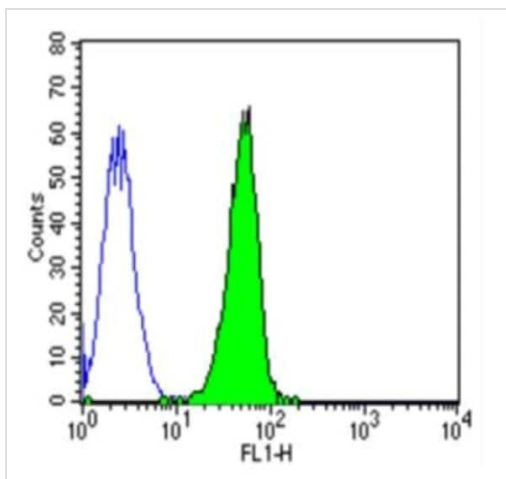
Immunocytochemistry - Anti-ErbB4 / HER4 antibody [HFR-1] (ab19391)

Immunocytochemistry analysis of NIH/3T3 (mouse embryo fibroblast cell line) cells labeling ErbB4 / HER4 with ab19391 at 1/50 dilution (right) compared to a negative control without primary antibody (left). Cells were fixed with formalin and permeabilized with 0.1% Triton X-100 in TBS for 5-10 minutes and blocked with 3% BSA-PBS for 30 minutes at room temperature. Cells were incubated with a DyLight[®] conjugated secondary antibody (green). Nuclear DNA was labelled with DAPI (blue).



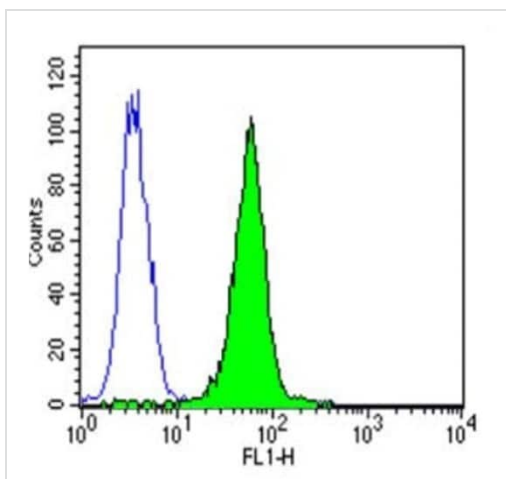
Immunocytochemistry - Anti-ErbB4 / HER4 antibody [HFR-1] (ab19391)

Immunocytochemistry analysis of SK-BR-3 (human mammary gland adenocarcinoma cell line) cells labeling ErbB4 / HER4 with ab19391 at 1/50 dilution (right) compared to a negative control without primary antibody (left). Cells were fixed with formalin and permeabilized with 0.1% Triton X-100 in TBS for 5-10 minutes and blocked with 3% BSA-PBS for 30 minutes at room temperature. Cells were incubated with a DyLight[®] conjugated secondary antibody (green). Cells were counterstained with Anti-Actin antibody (Alexa Fluor[®] 554) (red). Nuclear DNA was labelled with DAPI (blue).



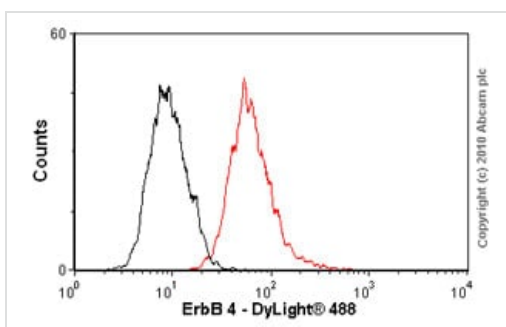
Flow Cytometry - Anti-ErbB4 / HER4 antibody [HFR-1] (ab19391)

Flow cytometry analysis of MCF7 (human breast adenocarcinoma cell line) cells labeling ErbB4 / HER4 with ab19391 (green) compared to an isotype control (blue). Cells were harvested, adjusted to a concentration of $1-5 \times 10^6$ cells/mL, fixed with 2% paraformaldehyde and washed with PBS. Cells were blocked with a 2% solution of BSA-PBS for 30 min at room temperature and incubated with ab19391 at a dilution of 1 μ g/test for 40 min at room temperature. Cells were then incubated for 40 min at room temperature in the dark using a Dylight[®] 488-conjugated secondary antibody and re-suspended in PBS for FACS analysis.



Flow Cytometry - Anti-ErbB4 / HER4 antibody [HFR-1] (ab19391)

Flow cytometry analysis of HeLa (human epithelial cell line from cervix adenocarcinoma) cells labeling ErbB4 / HER4 with ab19391 (green) compared to an isotype control (blue). Cells were harvested, adjusted to a concentration of $1-5 \times 10^6$ cells/mL, fixed with 2% paraformaldehyde and washed with PBS. Cells were blocked with a 2% solution of BSA-PBS for 30 min at room temperature and incubated with ab19391 at a dilution of 1 μ g/test for 40 min at room temperature. Cells were then incubated for 40 min at room temperature in the dark using a Dylight[®] 488-conjugated secondary antibody and re-suspended in PBS for FACS analysis.



Flow Cytometry - Anti-ErbB4 / HER4 antibody [HFR-1] (ab19391)

Overlay histogram showing HEK293 cells stained with ab19391 (red line). The cells were fixed with methanol (5 min) and then permeabilized with 0.1% PBS-Tween for 20 min. The cells were then incubated in 1x PBS / 10% normal goat serum / 0.3M glycine to block non-specific protein-protein interactions followed by the antibody (ab19391, 2 μ g/ 1×10^6 cells) for 30 min at 22°C. The secondary antibody used was DyLight[®] 488 goat anti-mouse IgG (H+L) ([ab96879](#)) at 1/500 dilution for 30 min at 22°C. Isotype control antibody (black line) was mouse IgG2b [PLPV219] ([ab91366](#), 2 μ g/ 1×10^6 cells) used under the same conditions. Acquisition of >5,000 events was performed. This antibody gave a positive signal in HEK293 cells fixed with 4% paraformaldehyde (10 min)/permeabilized in 0.1% PBS-Tween used under the same

conditions.

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