

Product datasheet

Anti-ErbB4 / HER4 (phospho Y1284) antibody [EPR2273(2)] ab109273

Recombinant RabMAb

★★★★★ [1 Abreviews](#) [6 References](#) [4 Images](#)

Overview

Product name	Anti-ErbB4 / HER4 (phospho Y1284) antibody [EPR2273(2)]
Description	Rabbit monoclonal [EPR2273(2)] to ErbB4 / HER4 (phospho Y1284)
Host species	Rabbit
Specificity	<p>This antibody detects ErbB4 / HER4 phosphorylated at Tyrosine 1284 and may also detect ErbB2/HER2 phosphorylated at Tyrosine 1248.</p> <p><i>Stimulation may be required to allow detection of the phosphorylated protein. Please see images below for recommended treatment conditions and positive controls.</i></p>
Tested applications	<p>Suitable for: WB, Dot blot</p> <p>Unsuitable for: Flow Cyt (Intra), ICC/IF, IHC-P or IP</p>
Species reactivity	Reacts with: Human
Immunogen	Synthetic peptide. This information is proprietary to Abcam and/or its suppliers.
Positive control	WB: A431 treated with 50mM pervanadate for 5 min whole cell lysate and A431 treated with 100 ng/ml Epidermal Growth Factor (EGF) for 30 min whole cell lysate.
General notes	<p>This product is a recombinant monoclonal antibody, which offers several advantages including:</p> <ul style="list-style-type: none">- High batch-to-batch consistency and reproducibility- Improved sensitivity and specificity- Long-term security of supply- Animal-free production <p>For more information see here.</p> <p>Our RabMAb[®] technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to RabMAb[®] patents.</p> <p>We are constantly working hard to ensure we provide our customers with best in class antibodies. As a result of this work we are pleased to now offer this antibody in purified format. We are in the process of updating our datasheets. The purified format is designated 'PUR' on our product labels. If you have any questions regarding this update, please contact our Scientific Support team.</p>

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Store at -20°C. Stable for 12 months at -20°C.
Storage buffer	pH: 7.20 Preservative: 0.01% Sodium azide Constituents: 59% PBS, 40% Glycerol (glycerin, glycerine), 0.5% BSA
Purity	Protein A purified
Clonality	Monoclonal
Clone number	EPR2273(2)
Isotype	IgG

Applications

The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab109273 in the following tested applications. The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
WB	★★★★★ (1)	1/1000 - 1/10000. Detects a band of approximately 180 kDa (predicted molecular weight: 147 kDa).
Dot blot		1/1000.

Application notes Is unsuitable for Flow Cyt (Intra), ICC/IF, IHC-P or IP.

Target

Function	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- α , 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.
Tissue specificity	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.
Sequence similarities	Belongs to the protein kinase superfamily. Tyr protein kinase family. EGF receptor subfamily. Contains 1 protein kinase domain.
Post-translational modifications	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.

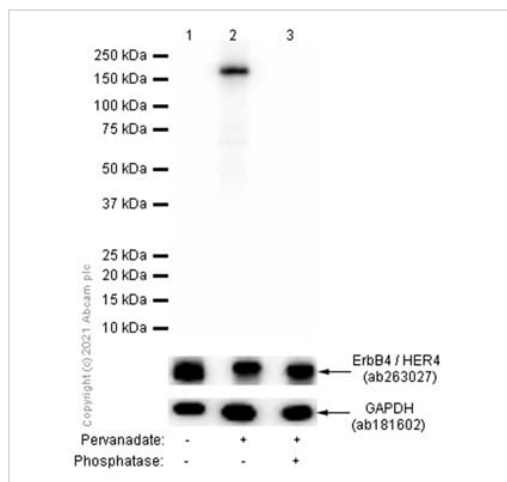
Ligand-binding increases phosphorylation on tyrosine residues. Isoform JM-A CYT-2 is constitutively phosphorylated on tyrosine residues in a ligand-independent manner. E4ICD2 but not E4ICD1 is phosphorylated on tyrosine residues.

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.

Cellular localization

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.

Images



Western blot - Anti-ErbB4 / HER4 (phospho Y1284) antibody [EPR2273(2)] (ab109273)

All lanes : Anti-ErbB4 / HER4 (phospho Y1284) antibody [EPR2273(2)] (ab109273) at 1/1000 dilution

Lane 1 : Untreated A431 (Human epidermoid carcinoma epithelial cell) whole cell lysate

Lane 2 : A431 treated with 50mM pervanadate for 5 min whole cell lysate

Lane 3 : A431 treated with 50mM pervanadate for 5 min whole cell lysate, then the membrane treated with Alkaline Phosphatase for 1 hour

Lysates/proteins at 15 µg per lane.

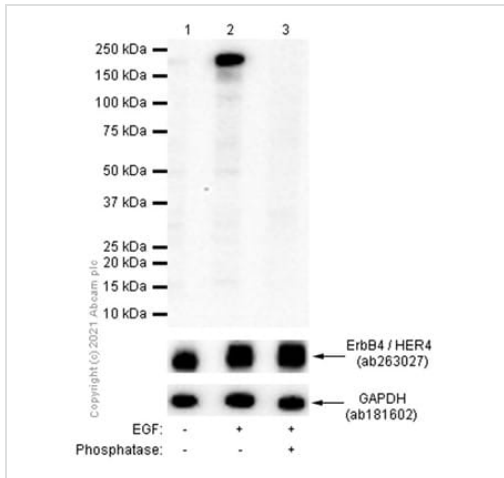
Secondary

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

Predicted band size: 147 kDa

Observed band size: 180 kDa

Blocking and diluting buffer: 5% NFD/MTBST



Western blot - Anti-ErbB4 / HER4 (phospho Y1284) antibody [EPR2273(2)] (ab109273)

All lanes : Anti-ErbB4 / HER4 (phospho Y1284) antibody [EPR2273(2)] (ab109273) at 1/1000 dilution

Lane 1 : Untreated A431 (Human epidermoid carcinoma epithelial cell) whole cell lysate

Lane 2 : A431 treated with 100 ng/ml Epidermal Growth Factor (EGF) for 30 min whole cell lysate

Lane 3 : A431 treated with 100 ng/ml Epidermal Growth Factor (EGF) for 30 min whole cell lysate, then the membrane treated with Alkaline Phosphatase for 1 hour

Lysates/proteins at 15 µg per lane.

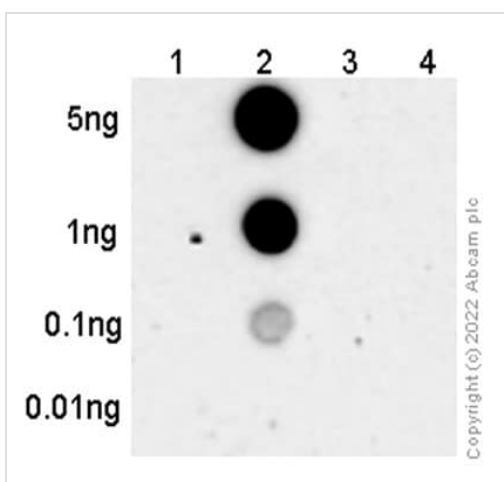
Secondary

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

Predicted band size: 147 kDa

Observed band size: 180 kDa

Blocking and diluting buffer: 5% NFD/MTBST



Dot Blot - Anti-ErbB4 / HER4 (phospho Y1284) antibody [EPR2273(2)] (ab109273)

Dot blot analysis using 1/1000 dilution ab109273 and Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated (**ab97051**) secondary at 1/100000 dilution.

Blocking and diluting buffer: 5% NFD/MTBST

Lane 1: ErbB4 non-phospho peptide

Lane 2: ErbB4 Y1284 phospho peptide

Lane 3: ErbB2 non-phospho peptide

Lane 4: ErbB2 Y1248 phospho peptide

Exposure time: 3 minutes

Why choose a recombinant antibody?



Research with confidence
Consistent and reproducible results



Long-term and scalable supply
Recombinant technology



Success from the first experiment
Confirmed specificity



Ethical standards compliant
Animal-free production

Anti-ErbB4 / HER4 (phospho Y1284) antibody

[EPR2273(2)] (ab109273)

Please note: All products are "FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES"

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