


## Product datasheet

# Anti-ErbB4 / HER4 antibody [EP192Y] ab76303

Recombinant RabMAb

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### Overview

<b>Product name</b>	Anti-ErbB4 / HER4 antibody [EP192Y]
<b>Description</b>	Rabbit monoclonal [EP192Y] to ErbB4 / HER4
<b>Host species</b>	Rabbit
<b>Tested applications</b>	<b>Suitable for:</b> Flow Cyt (Intra), WB <b>Unsuitable for:</b> ICC/IF, IHC-P or IP
<b>Species reactivity</b>	<b>Reacts with:</b> Human <b>Predicted to work with:</b> Mouse, Rat 
<b>Immunogen</b>	Synthetic peptide within Human ErbB4/ HER4 aa 1200-1300 (C terminal). The exact sequence is proprietary. Database link: <a href="#">Q15303</a>
<b>Positive control</b>	WB: Human brain tissue lysate. Flow Cyt (intra): T47D cells.
<b>General notes</b>	This product is a recombinant monoclonal antibody, which offers several advantages including: <ul style="list-style-type: none"> <li>- High batch-to-batch consistency and reproducibility</li> <li>- Improved sensitivity and specificity</li> <li>- Long-term security of supply</li> <li>- Animal-free production</li> </ul> For more information <a href="#">see here</a> . Our RabMAb <sup>®</sup> technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to <a href="#">RabMAb<sup>®</sup> patents</a> .

### Properties

<b>Form</b>	Liquid
<b>Storage instructions</b>	Shipped at 4°C. Store at -20°C. Stable for 12 months at -20°C.
<b>Storage buffer</b>	pH: 7.20 Preservative: 0.01% Sodium azide Constituents: 9% PBS, 40% Glycerol (glycerin, glycerine), 0.05% BSA, 50% Tissue culture supernatant
<b>Purity</b>	Protein A purified
<b>Clonality</b>	Monoclonal

Clone number EP192Y

Isotype IgG

## Applications

**The Abpromise guarantee** Our **Abpromise guarantee** covers the use of ab76303 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
Flow Cyt (Intra)		1/20.
WB		1/1000 - 1/2000. Detects a band of approximately 185 kDa (predicted molecular weight: 147 kDa).

**Application notes** Is unsuitable for 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- $\alpha$ , 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.

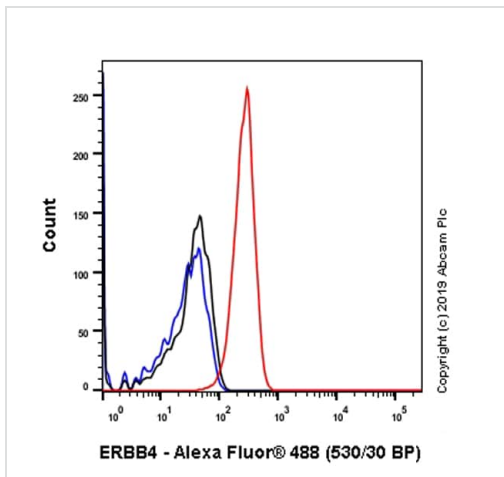
Ubiquitinated. The ERBB4 intracellular domain is ubiquitinated and targeted to proteosomal

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

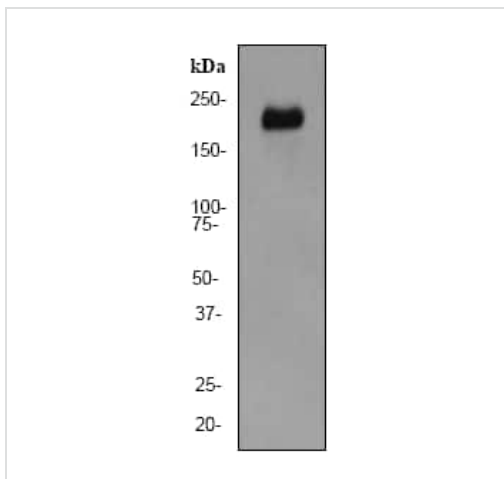
Membrane and Nucleus. Following proteolytical processing E4ICD (E4ICD1 or E4ICD2 generated from the respective isoforms) is translocated to the nucleus. Significantly more E4ICD2 than E4ICD1 is found in the nucleus. E4ICD2 colocalizes with YAP1 in the nucleus.

## Images



Flow Cytometry (Intracellular) - Anti-ErbB4 / HER4 antibody [EP192Y] (ab76303)

Intracellular Flow Cytometry analysis of T47D (Human ductal breast epithelial tumor epithelial cell) cells labeling ErbB4 / HER4 with purified ab76303 at 1/20 dilution (7.5µg/ml) (Red). Cells were fixed with 4% paraformaldehyde and permeabilised with 90% methanol. A Goat anti rabbit IgG (Alexa Fluor® 488, **ab150077**) secondary antibody was used at 1/2000 dilution. Isotype control - Rabbit monoclonal IgG (**ab172730**) / Black. Unlabeled control - Unlabelled cells / blue.



Western blot - Anti-ErbB4 / HER4 antibody [EP192Y] (ab76303)

Anti-ErbB4 / HER4 antibody [EP192Y] (ab76303) at 1/2000 dilution + human brain tissue lysate at 10 µg


### Secondary

Goat anti-rabbit HRP at 1/2000 dilution

**Predicted band size:** 147 kDa

**Observed band size:** 185 kDa

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 antibody [EP192Y] (ab76303)

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

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