

**Phospho-HER4(Y1188) Antibody**  
**Affinity Purified Rabbit Polyclonal Antibody (Pab)**  
**Catalog # AP3124a**

## Specification

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### Phospho-HER4(Y1188) Antibody - Product Information

Application	IHC-P, WB,E
Primary Accession	<a href="#">Q15303</a>
Reactivity	Human
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG

### Phospho-HER4(Y1188) Antibody - Additional Information

**Gene ID** 2066

#### Other Names

Receptor tyrosine-protein kinase erbB-4, Proto-oncogene-like protein c-ErbB-4, Tyrosine kinase-type cell surface receptor HER4, p180erbB4, ERBB4 intracellular domain, 4ICD, E4ICD, s80HER4, ERBB4, HER4

#### Target/Specificity

This HER4 Antibody is generated from rabbits immunized with a KLH conjugated synthetic phosphopeptide corresponding to amino acid residues surrounding Y1188 of human HER4.

#### Dilution

IHC-P~~1:100

WB~~1:1000

E~~Use at an assay dependent concentration.

#### Format

Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.

#### Storage

Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

#### Precautions

Phospho-HER4(Y1188) Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

### Phospho-HER4(Y1188) Antibody - Protein Information

**Name** ERBB4

**Synonyms** HER4

**Function** Tyrosine-protein kinase that plays an essential role as cell surface receptor for neuregulins and EGF family members and regulates development of the heart, the central nervous system and the mammary gland, gene transcription, cell proliferation, differentiation, migration and apoptosis. Required for normal cardiac muscle differentiation during embryonic development, and for postnatal cardiomyocyte proliferation. Required for normal development of the embryonic central nervous system, especially for normal neural crest cell migration and normal axon guidance. Required for mammary gland differentiation, induction of milk proteins and lactation. Acts as cell-surface receptor for the neuregulins NRG1, NRG2, NRG3 and NRG4 and the EGF family members BTC, EREG and HBEGF. Ligand binding triggers receptor dimerization and autophosphorylation at specific tyrosine residues that then serve as binding sites for scaffold proteins and effectors. Ligand specificity and signaling is modulated by alternative splicing, proteolytic processing, and by the formation of heterodimers with other ERBB family members, thereby creating multiple combinations of intracellular phosphotyrosines that trigger ligand- and context- specific cellular responses. Mediates phosphorylation of SHC1 and activation of the MAP kinases MAPK1/ERK2 and MAPK3/ERK1. Isoform JM-A CYT-1 and isoform JM-B CYT-1 phosphorylate PIK3R1, leading to the activation of phosphatidylinositol 3-kinase and AKT1 and protect cells against apoptosis. Isoform JM-A CYT-1 and isoform JM-B CYT-1 mediate reorganization of the actin cytoskeleton and promote cell migration in response to NRG1. Isoform JM-A CYT-2 and isoform JM-B CYT-2 lack the phosphotyrosine that mediates interaction with PIK3R1, and hence do not phosphorylate PIK3R1, do not protect cells against apoptosis, and do not promote reorganization of the actin cytoskeleton and cell migration. Proteolytic processing of isoform JM-A CYT-1 and isoform JM- A CYT-2 gives rise to the corresponding soluble intracellular domains (4ICD) that translocate to the nucleus, promote nuclear import of STAT5A, activation of STAT5A, mammary epithelium differentiation, cell proliferation and activation of gene expression. The ERBB4 soluble intracellular domains (4ICD) colocalize with STAT5A at the CSN2 promoter to regulate transcription of milk proteins during lactation. The ERBB4 soluble intracellular domains can also translocate to mitochondria and promote apoptosis.

#### **Cellular Location**

Cell membrane; Single-pass type I membrane protein. Note=In response to NRG1 treatment, the activated receptor is internalized

#### **Tissue Location**

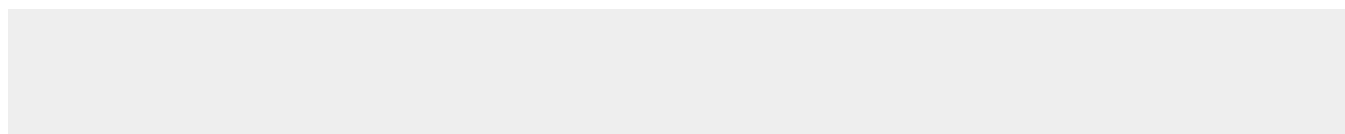
Expressed at highest levels in brain, heart, kidney, in addition to skeletal muscle, parathyroid, cerebellum, pituitary, spleen, testis and breast. Lower levels in thymus, lung, salivary gland, and pancreas. Isoform JM-A CYT-1 and isoform JM-B CYT-1 are expressed in cerebellum, but only the isoform JM-B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

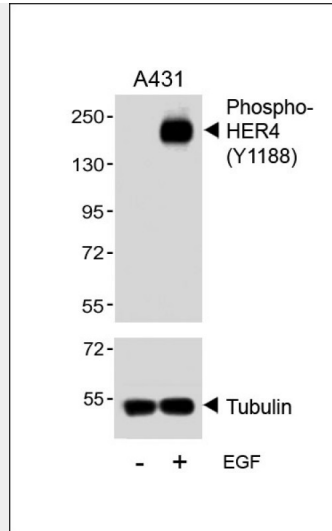
### **Phospho-HER4(Y1188) Antibody - Protocols**

Provided below are standard protocols that you may find useful for product applications.

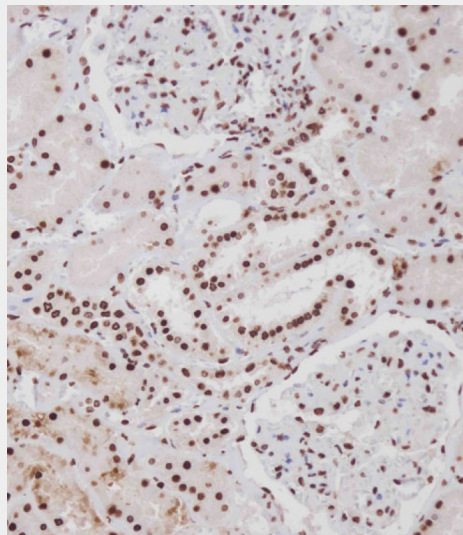
- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

### **Phospho-HER4(Y1188) Antibody - Images**

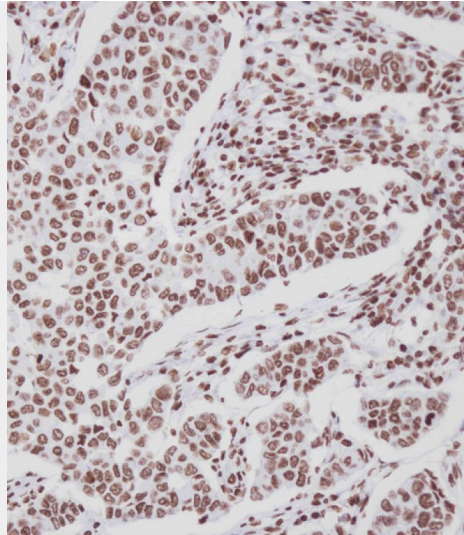




Western blot analysis of lysates from A431 cell line, untreated or treated with EGF, 100ng/ml, using Phospho-HER4(Y1188) Antibody(upper) or tubulin (lower).



Immunohistochemical analysis of AP3124A on paraffin-embedded Human kidney tissue. Tissue was fixed with formaldehyde at room temperature. Heat induced epitope retrieval was performed by EDTA buffer (pH9.0). Samples were incubated with primary antibody(1:100) for 1 hour at room temperature. Undiluted CRF Anti-Polyvalent HRP Polymer antibody was used as the secondary antibody.



Immunohistochemical analysis of AP3124A on paraffin-embedded Human breast carcinoma tissue. Tissue was fixed with formaldehyde at room temperature. Heat induced epitope retrieval was performed by EDTA buffer (pH9. 0). Samples were incubated with primary antibody(1:100) for 1 hour at room temperature. Undiluted CRF Anti-Polyvalent HRP Polymer antibody was used as the secondary antibody.

#### **Phospho-HER4(Y1188) Antibody - Background**

The HER4/ERBB4 gene is a member of the type I receptor tyrosine kinase subfamily that includes EGFR, ERBB2, and ERBB3. It encodes a receptor for NDF/heregulin.

#### **Phospho-HER4(Y1188) Antibody - References**

- Tanimura, K., et al., Eur. J. Endocrinol. 151(1):93-101 (2004).
- Hughes, D.P., et al., Cancer Res. 64(6):2047-2053 (2004).
- Cheng, Q.C., et al., J. Biol. Chem. 278(40):38421-38427 (2003).
- Chaudhury, A.R., et al., J. Neuropathol. Exp. Neurol. 62(1):42-54 (2003).
- Komuro, A., et al., J. Biol. Chem. 278(35):33334-33341 (2003).