

## Anti-ErbB 4/ERBB4 Antibody Picoband™

Catalog Number: A00296

### About ERBB4

ERBB4 (V-erb-b2 avian erythroblastic leukemia viral oncogene homolog 4) also known as ONCOGENE ERBB4 or HER4, is an enzyme that in humans is encoded by the ERBB4 gene. The HER4/ERBB4 gene is a member of the type I receptor tyrosine kinase subfamily that includes EGFR, ERBB2 and ERBB3. This gene is mapped on 2q34. ERBB4 is a single-pass type I transmembrane protein with multiple furin-like cysteine rich domains, a tyrosine kinase domain, a phosphatidylinositol-3 kinase binding site and a PDZ domain binding motif. Furthermore, ERBB4 is a transmembrane receptor tyrosine kinase that regulates cell proliferation and differentiation. After binding its ligand, heregulin, or activation of protein kinase C by TPA, the ERBB4 ectodomain is cleaved by a metalloprotease.

### Overview

Product Name	Anti-ErbB 4/ERBB4 Antibody Picoband™
Reactive Species	Human, Mouse, Rat
Description	Boster Bio Anti-ErbB 4/ERBB4 Antibody Picoband™ catalog # A00296. Tested in IHC, WB applications. This antibody reacts with Human, Mouse, Rat.
Application	IHC, WB
Clonality	Polyclonal
Formulation	Each vial contains 4mg Trehalose, 0.9mg NaCl, 0.2mg Na <sub>2</sub> HPO <sub>4</sub> , 0.05mg NaN <sub>3</sub> .
Storage Instructions	Store at -20°C for one year from date of receipt. After reconstitution, at 4°C for one month. It can also be aliquotted and stored frozen at -20°C for six months. Avoid repeated freeze-thaw cycles.
Host	Rabbit
Uniprot ID	Q15303

### Technical Details

Immunogen	A synthetic peptide corresponding to a sequence at the N-terminus of human ErbB 4, identical to the related mouse and rat sequences.
Predicted Reactive Species	Chicken
Recommended Detection Systems	Boster recommends Enhanced Chemiluminescent Kit with anti-Rabbit IgG (EK1002) for Western blot, and HRP Conjugated anti-Rabbit IgG Super Vision Assay Kit (SV0002-1) for IHC(P).
Cross Reactivity	No cross-reactivity with other proteins.
Isotype	Rabbit IgG
Form	Lyophilized

Concentration	Adding 0.2 ml of distilled water will yield a concentration of 500 ug/ml.
Purification	Immunogen affinity purified.
Suggested Dilutions	<p>Dilute the sample so that the expected range of concentrations fall within the detection range of this kit.</p> <p>If the expected range of concentration is unknown, a pilot test should be conducted to decide the optimal dilution ratio for your samples.</p> <p>Some PubMed article(s) citing the expression level of this target are as follows:</p> <p>Boster Bio's internal QC testing used:</p> <p>Western blot, 0.1-0.5ug/ml</p> <p>Immunohistochemistry (Paraffin-embedded Section), 0.5-1ug/ml</p>

## Anti-ErbB 4/ERBB4 Antibody Picoband™ (A00296) Images

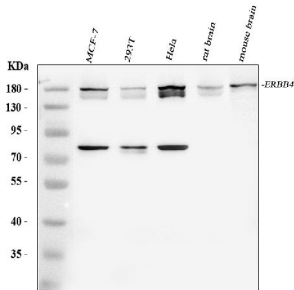


Figure 1. Western blot analysis of ErbB 4 using anti-ErbB 4 antibody (A00296).

Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours. The sample well of each lane was loaded with 30 ug of sample under reducing conditions.

Lane 1: human MCF-7 whole cell lysates,

Lane 2: human 293T whole cell lysates,

Lane 3: human Hela whole cell lysates,

Lane 4: rat brain tissue lysates,

Lane 5: mouse brain tissue lysates.

After electrophoresis, proteins were transferred to a nitrocellulose membrane at 150 mA for 50-90 minutes.

Blocked the membrane with 5% non-fat milk/TBS for 1.5

hour at RT. The membrane was incubated with rabbit anti-

ErbB 4 antigen affinity purified polyclonal antibody (Catalog # A00296) at 0.5 ug/mL overnight at 4°C, then washed with

TBS-0.1%Tween 3 times with 5 minutes each and probed

with a goat anti-rabbit IgG-HRP secondary antibody at a dilution of 1:5000 for 1.5 hour at RT. The signal is developed

using an Enhanced Chemiluminescent detection (ECL) kit

(Catalog # EK1002) with Tanon 5200 system. A specific

band was detected for ErbB 4 at approximately 180 kDa.

The expected band size for ErbB 4 is at 148 kDa.

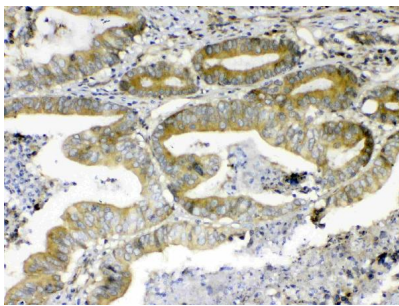


Figure 2. IHC analysis of ErbB 4 using anti-ErbB 4 antibody (A00296).

ErbB 4 was detected in paraffin-embedded section of human

colon cancer tissue. Heat mediated antigen retrieval was

performed in citrate buffer (pH6, epitope retrieval solution)

for 20 mins. The tissue section was blocked with 10% goat

serum. The tissue section was then incubated with 1ug/ml

rabbit anti-ErbB 4 Antibody (A00296) overnight at 4°C.

Biotinylated goat anti-rabbit IgG was used as secondary

antibody and incubated for 30 minutes at 37°C. The tissue

section was developed using Streptavidin-Biotin-Complex

(SABC)(Catalog # SA1022) with DAB as the chromogen.

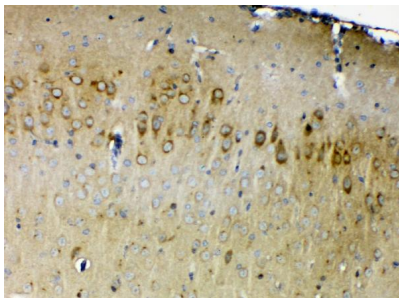


Figure 3. IHC analysis of ErbB 4 using anti-ErbB 4 antibody (A00296).

ErbB 4 was detected in paraffin-embedded section

of mouse brain tissue. Heat mediated antigen retrieval was

performed in citrate buffer (pH6, epitope retrieval solution)

for 20 mins. The tissue section was blocked with 10% goat

serum. The tissue section was then incubated with 1ug/ml

rabbit anti-ErbB 4 Antibody (A00296) overnight at 4°C.

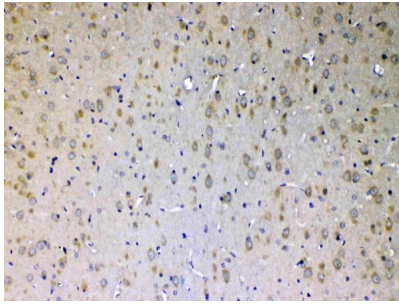
Biotinylated goat anti-rabbit IgG was used as secondary

antibody and incubated for 30 minutes at 37°C. The tissue

section was developed using Streptavidin-Biotin-Complex

(SABC)(Catalog # SA1022) with DAB as the chromogen.

Figure 4. IHC analysis of ErbB 4 using anti-ErbB 4 antibody (A00296).



ErbB 4 was detected in paraffin-embedded section of rat brain tissue. Heat mediated antigen retrieval was performed in citrate buffer (pH6, epitope retrieval solution) for 20 mins. The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1ug/ml rabbit anti-ErbB 4 Antibody (A00296) overnight at 4°C. Biotinylated goat anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using Streptavidin-Biotin-Complex (SABC)(Catalog # SA1022) with DAB as the chromogen.

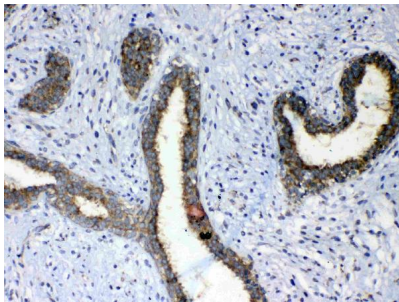


Figure 5. IHC analysis of ErbB 4 using anti-ErbB 4 antibody (A00296).

ErbB 4 was detected in paraffin-embedded section of human mammary cancer tissue. Heat mediated antigen retrieval was performed in citrate buffer (pH6, epitope retrieval solution) for 20 mins. The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1ug/ml rabbit anti-ErbB 4 Antibody (A00296) overnight at 4°C. Biotinylated goat anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using Streptavidin-Biotin-Complex (SABC)(Catalog # SA1022) with DAB as the chromogen.

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