Human ErbB4/Her4 Antibody

Antigen Affinity-purified Polyclonal Goat IgG
Catalog Number: AF10446

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human ErbB4/Her4 in direct ELISAs.
Source	Polyclonal Goat IgG
Purification	Antigen Affinity-purified
Immunogen	*E. coli*-derived recombinant human ErbB4/Her4 Ala1027-Pro1292 Accession # Q15303
Formulation	Lyophilized from a 0.2 μm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied either lyophilized or as a 0.2 μm filtered solution in PBS.

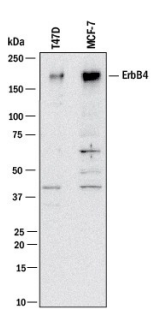
APPLICATIONS

Please Note: *Optimal dilutions should be determined by each laboratory for each application. General Protocols are available in the Technical Information section on our website.*

	Recommended Concentration	Sample
Western Blot	1 µg/mL	See Below
Knockout Validated	ErbB4/Her4 is specifically detected in MCF-7 human breast cancer parental cell line but is not detectable in ErbB4/Her4 knockout MCF-7 cell line.	

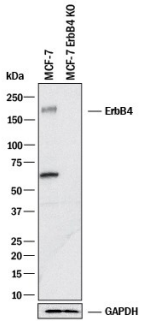
DATA

Western Blot



Detection of Human ErbB4/Her4 by Western Blot. Western blot shows lysates of T47D human breast cancer cell line and MCF-7 human breast cancer cell line. PVDF membrane was probed with 1 µg/mL of Goat Anti-Human ErbB4/Her4 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF10446) followed by HRP-conjugated Anti-Goat IgG Secondary Antibody (Catalog # HAF017). A specific band was detected for ErbB4/Her4 at approximately 180 kDa (as indicated). This experiment was conducted under reducing conditions and using Immunoblot Buffer Group 1.

Knockout Validated



Western Blot Shows Human ErbB4/Her4 Specificity by Using Knockout Cell Line. Western blot shows lysates of MCF-7 human breast cancer parental cell line and ErbB4/Her4 knockout MCF-7 cell line (KO). PVDF membrane was probed with 1 µg/mL of Goat Anti-Human ErbB4/Her4 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF10446) followed by HRP-conjugated Anti-Goat IgG Secondary Antibody (Catalog # HAF017). A specific band was detected for ErbB4/Her4 at approximately 180 kDa (as indicated) in the parental MCF-7 cell line, but is not detectable in knockout MCF-7 cell line. GAPDH (Catalog # 2275-PC-100) is shown as a loading control. This experiment was conducted under reducing conditions and using Immunoblot Buffer Group 1.

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.2 mg/mL in sterile PBS.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C
Stability & Storage	**Use a manual defrost freezer and avoid repeated freeze-thaw cycles.** • 12 months from date of receipt, -20 to -70 °C as supplied. • 1 month, 2 to 8 °C under sterile conditions after reconstitution. • 6 months, -20 to -70 °C under sterile conditions after reconstitution.

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BACKGROUND

ErbB4, also called Her4 (human epidermal growth factor receptor 4), is a type I membrane glycoprotein that is a member of the ErbB family of tyrosine kinase receptors. ErbB family members serve as receptors for the epidermal growth factor (EGF) family of growth factors. ErbB4 is expressed in normal skeletal muscle, heart, pituitary, brain, and several breast carcinomas. ErbB4 ligands include the neuregulins, beta-cellulin and heparin-binding EGF-like growth factor (HB-EGF). Monomeric ErbB4 binds its ligands with low affinity. Typically, heterodimerization with ErbB2 forms the high affinity receptor complex. However, ErbB4 has also been shown to heterodimerize with both ErbB1 and ErbB3. It has been suggested that the identity of the ligand may influence the dimerization partner. Because ErbB3 contains a defective kinase domain, the kinase domain of ErbB2 is responsible for initiating the tyrosine phosphorylation signal through the heterodimeric receptor. It has been found that a discrete three amino acid (aa) signal in the ErbB3 cytoplasmic domain is critical for transactivation of ErbB2. Interestingly, this same three amino acid signal has been found in ErbB4 and ErbB1 (EGF R). Several ErbB4 isoforms exist. Two of these differ in the presence of juxtamembrane extracellular sequences which regulate the ability of TACE (TNF-α converting enzyme) to proteolytically cleave ErbB4 from the cell surface. These isoforms exhibit tissue-specific expression. Another isoform lacks the phosphoinositide 3-kinase activation sequence present in the ErbB4 cytoplasmic domain. Human ErbB4 consists of 1308 amino acids with a 25 aa signal sequence, a 626 aa extracellular domain, a 24 aa transmembrane region, and a 633 aa cytoplasmic domain. ErbB4 appears to play important roles in neuronal development, development of the heart and cancer.

References:

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