Human ErbB4/Her4 Antibody

Monoclonal Mouse IgG_{2B} Clone # 182810

Catalog Number: MAB11313

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human ErbB4/Her4 in direct ELISAs.
Source	Monoclonal Mouse IgG_{2B} Clone # 182810
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	Mouse myeloma cell line NS0-derived human ErbB4/Her4 Gln26-Arg649 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.

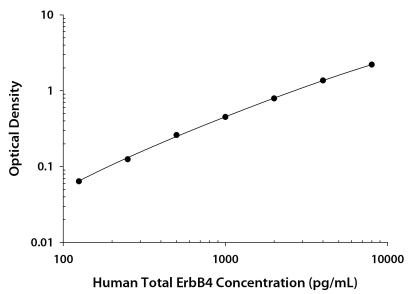
APPLICATIONS

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.*

ELISA	This antibody functions as an ELISA detection antibody when paired with Mouse Anti-Human ErbB4/Her4 Monoclonal Antibody (Catalog # MAB11314). This product is intended for assay development on various assay platforms requiring antibody pairs. We recommend the Human Total ErbB4/Her4 DuoSet IC ELISA Kit (Catalog # DYC1133-2) for convenient development of a sandwich ELISA.

DATA

ELISA



Human ErbB4/Her4 ELISA Standard Curve. Recombinant Human ErbB4/Her4 protein was serially diluted 2-fold and captured by Mouse Anti-Human ErbB4/Her4 Monoclonal Antibody (Catalog # MAB11314) coated on a Clear Polystyrene Microplate (Catalog # DY990). Mouse Anti-Human ErbB4/Her4 Monoclonal Antibody (Catalog # MAB11313) was biotinylated and incubated with the protein captured on the plate. Detection of the standard curve was achieved by incubating Streptavidin-HRP (Catalog # DY998) followed by Substrate Solution (Catalog # DY999) and stopping the enzymatic reaction with Stop Solution (Catalog # DY994).

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.5 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 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 (EGFR). 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 (aa) 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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