10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

Anti-ERBB3/Her3 Antibody

Catalog # ABO11187

Product Information

Application	WB
Primary Accession	P21860
Host	Rabbit
Reactivity	Human
Clonality	Polyclonal
Format	Lyophilized
Description	Rabbit IgG polyclonal antibody for Receptor tyrosine-protein kinase erbB-3(ERBB3) detection. Tested with WB in Human.
Reconstitution	Add 0.2ml of distilled water will yield a concentration of 500ug/ml.

Additional Information

Gene ID	2065
Other Names	Receptor tyrosine-protein kinase erbB-3, 2.7.10.1, Proto-oncogene-like protein c-ErbB-3, Tyrosine kinase-type cell surface receptor HER3, ERBB3, HER3
Calculated MW	148098
Application Details	Western blot, 0.1-0.5 □g/ml, Human
Subcellular Localization	Isoform 1: Cell membrane; Single-pass type I membrane protein.
Tissue Specificity	Epithelial tissues and brain.
Source	Eukaryota
Protein Name	Receptor tyrosine-protein kinase erbB-3
Contents	Each vial contains 5mg BSA, 0.9mg NaCl, 0.2mg Na2HPO4, 0.05mg Thimerosal, 0.05mg NaN3.
Immunogen	A synthetic peptide corresponding to a sequence at the N-terminus of human ErbB 3(162-181aa DWRDIVRDRDAEIVVKDNGR).
Purification	Immunogen affinity purified.
Cross Reactivity	No cross reactivity with other proteins
Storage	At -20˚C for one year. After r˚Constitution, at 4˚C for one month. It˚Can also be aliquotted and stored frozen at -20˚C for a longer time.Avoid repeated freezing and thawing.

Sequence Similarities	Belongs to the protein kinase superfamily. Tyr protein kinase family. EGF receptor subfamily.

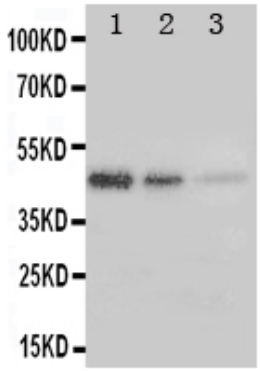
Protein Information

Name	ERBB3
Synonyms	HER3
Function	Tyrosine kinase receptor that, despite substitutions of key catalytic residues in the kinase domain, retains residual catalytic activity enabling autophosphorylation (PubMed:9148746, PubMed:20351256). Functions primarily as a heterodimer, preferentially partnering with ERBB2/HER2, which phosphorylates ERBB3 on specific tyrosine residues and provides the kinase activity required for downstream signaling (PubMed:22983903). Binds neuregulins NRG1 and NRG2 through its extracellular domain, which induces conformational change from a tethered autoinhibited state to an extended conformation competent for dimerization (PubMed:20682778). Upon heterodimerization and trans-phosphorylation, acts as the most efficient activator of the PI3K/AKT pathway within the ErbB family (PubMed:22983903). Also activates the RAS/MAPK/ERK cascade to promote cell proliferation (PubMed:22983903). Plays an essential role in cardiac development; required for normal formation of the endocardial cushion and ventricular trabeculation during embryogenesis (Potential). Critical for peripheral nervous system development, where neuregulin-1/ERBB3 signaling drives Schwann cell survival, proliferation, and differentiation, and is required for axonal myelination (By similarity). Involved in epithelial morphogenesis and mammary gland development (By similarity). Also involved in the regulation of myeloid cell differentiation (PubMed:27416908). Participates in a regulatory feedback loop whereby pathway activation induces transcriptional up-regulation of ERBB3 expression (PubMed:21368164). Participates in vesicular sorting by stabilizing the ARF6-GGA3-RABEP1 endosomal sorting complex, to promote early recycling of TFRC and ITGB1 (PubMed:41348103). May also be activated by additional ligands including CSPG5 and EGFL6; the latter triggers assembly of an ERBB2/ERBB3/ITGB3 signaling complex leading to ERK phosphorylation and cell proliferation (PubMed:15358134, PubMed:41151154).
Cellular Location	[Isoform 1]: Cell membrane; Single-pass type I membrane protein
Tissue Location	Epithelial tissues and brain.

Background

ERBB3(V-erb-b2 avian erythroblastic leukemia viral oncogene homolog 3) also known as ONCOGENE ERBB3 or HER3, is an enzyme that in humans is encoded by the ERBB3 gene. This gene encodes a member of the epidermal growth factor receptor(EGFR) family of receptor tyrosine kinases. This membrane-bound protein has a neuregulin binding domain but not an active kinase domain. By in situ hybridization, Kraus et al.(1989) mapped the ERBB3 gene to chromosome 12q13. Carraway et al.(1994) demonstrated that ERBB3 is a receptor for heregulin and is capable of mediating HGL-stimulated tyrosine phosphorylation of itself. Most notably, EGFR and ErbB2 became markedly more promiscuous as the threshold was lowered, whereas ErbB3did not. Engelman et al.(2007) found that amplification of MET caused gefitinib resistance by driving ERBB3-dependent activation of phosphoinositide 3-kinase, a pathway though to be specific to EGFR/ERBB family receptors.

Images



Anti-ErbB 3 antibody, ABO11187, Western blottingRecombinant Protein Detection Source: E.coli derived -recombinant Human ERBB3, 45.0KD(162aa tag+ M1-A245)Lane 1: Recombinant Human ERBB3 Protein 5ngLane 2: Recombinant Human ERBB3 Protein 2.5ngLane 3: Recombinant Human ERBB3 Protein 1.25ng

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