

DESCRIPTION	
<b>Species Reactivity</b>	Human
<b>Specificity</b>	Detects human ErbB3 in direct ELISAs and Western blots. In direct ELISAs, less than 1% cross-reactivity with recombinant human (rh) EGF R, rhErbB2, and rhErbB4 is observed.
<b>Source</b>	Polyclonal Goat IgG
<b>Purification</b>	Antigen Affinity-purified
<b>Immunogen</b>	Mouse myeloma cell line NS0-derived recombinant human ErbB3/Her3 Ser20-Thr643 Accession # P21860
<b>Endotoxin Level</b>	<0.10 EU per 1 µg of the antibody by the LAL method.
<b>Formulation</b>	Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied as a 0.2 µm filtered solution in PBS.

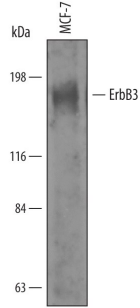
## APPLICATIONS

**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
<b>Western Blot</b>	1 µg/mL	See Below
<b>Flow Cytometry</b>	2.5 µg/10 <sup>6</sup> cells	MCF-7 human breast cancer cell line
<b>CyTOF-ready</b>	Ready to be labeled using established conjugation methods. No BSA or other carrier proteins that could interfere with conjugation.	
<b>Neutralization</b>	Measured by its ability to neutralize NRG1-β1/HRG1-β1-induced proliferation in the MCF-7 human breast cancer cell line. The Neutralization Dose (ND <sub>50</sub> ) is typically 0.125-0.5 µg/mL in the presence of 10 ng/mL Recombinant Human NRG1-β1/HRG1-β1 Extracellular Domain.	

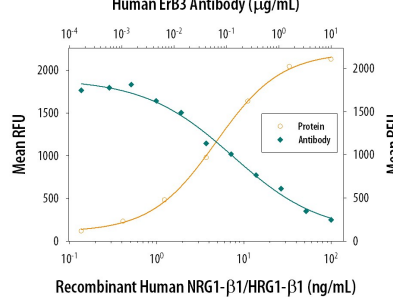
## DATA

**Western Blot**



**Detection of Human ErbB3/Her3 by Western Blot.**  
Western blot shows lysates of MCF-7 human breast cancer cell line. PVDF Membrane was probed with 1 µg/mL of Goat Anti-Human ErbB3/Her3 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF234) followed by HRP-conjugated Anti-Goat IgG Secondary Antibody (Catalog # HAF019). A specific band was detected for ErbB3/Her3 at approximately 180kDa (as indicated). This experiment was conducted under reducing conditions and using Immunoblot Buffer Group 8.

**Neutralization**



**Cell Proliferation Induced by NRG1-β1/HRG1-β1 and Neutralization by Human ErbB3/Her3 Antibody.**  
Recombinant Human NRG1-β1/HRG1-β1 Extracellular Domain (Catalog # 377-HB) stimulates proliferation in the MCF-7 human breast cancer cell line in a dose-dependent manner (orange line). Proliferation elicited by Recombinant Human NRG1-β1/HRG1-β1 Extracellular Domain (10 ng/mL) is neutralized (green line) by increasing concentrations of Goat Anti-Human ErbB3/Her3 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF234). The ND<sub>50</sub> is typically 0.125-0.5 µg/mL.

## PREPARATION AND STORAGE

<b>Reconstitution</b>	Reconstitute at 0.2 mg/mL in sterile PBS.
<b>Shipping</b>	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
<b>Stability &amp; Storage</b>	<p><b>Use a manual defrost freezer and avoid repeated freeze-thaw cycles.</b></p> <ul style="list-style-type: none"> <li>• 12 months from date of receipt, -20 to -70 °C as supplied.</li> <li>• 1 month, 2 to 8 °C under sterile conditions after reconstitution.</li> <li>• 6 months, -20 to -70 °C under sterile conditions after reconstitution.</li> </ul>

## BACKGROUND

ErbB3, also called Her3 (human epidermal growth factor receptor 3), 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. Among ErbB family members, ErbB3 is unique in that it contains a defective kinase domain. ErbB3 is expressed in keratinocytes, melanocytes, skeletal muscle cells, embryonic myoblasts and Schwann cells. Monomeric ErbB3 serves as a low affinity receptor for the heregulins (HRG). ErbB3 heterodimerizes with ErbB2 to form a high affinity receptor complex. In contrast, ErbB3 homodimerization or heterodimerization with ErbB4 forms a low affinity heregulin-binding complex. 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. The cytoplasmic domain of ErbB3 also contains six consensus binding motifs for the SH2 domain of the regulatory p85 subunit of phosphoinositide 3-kinase (PI 3-kinase, PI3K) as well as one proline-rich consensus binding motif for the SH3 domain of p85. Human ErbB3 consists of 1342 amino acids (aa) with a 19 aa signal sequence, a 624 aa extracellular domain, a 21 aa transmembrane region, and a 678 aa cytoplasmic domain. ErbB3 appears to play roles in development, cancer, communication at the neuromuscular junction, and regulation of cell growth and differentiation.

## References:

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