Human ErbB3/Her3 Antibody

Monoclonal Mouse IgG_1 Clone # 66223

Catalog Number: MAB3481

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human ErbB3/Her3 in ELISAs. Does not cross-react with recombinant EGF R.
Source	Monoclonal Mouse IgG_1 Clone # 66223
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	Mouse myeloma cell line NS0-derived recombinant human ErbB3/Her3 Ser20-Thr643 Accession # P21860
Endotoxin Level	<0.10 EU per 1 µg of the antibody by the LAL method.
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.

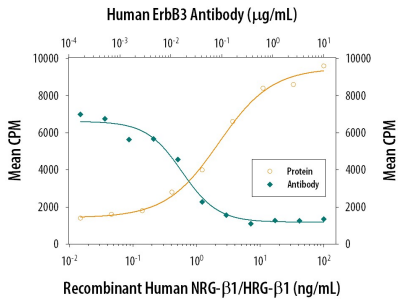
APPLICATIONS

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
Flow Cytometry	2.5 µg/10^6 cells	MCF-7 human breast cancer cell line
Human ErbB3/Her3 Sandwich Immunoassay		**Reagent**
ELISA Capture	2-8 µg/mL	Human ErbB3/Her3 Antibody (Catalog # MAB3481)
ELISA Detection	0.5-2.0 µg/mL	Human ErbB3/Her3 Biotinylated Antibody (Catalog # BAM348)
Standard		Recombinant Human ErbB3/Her3 Fc Chimera (Catalog # 348-RB)
CyTOF-ready	Ready to be labeled using established conjugation methods. No BSA or other carrier proteins that could interfere with conjugation.	
Neutralization	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_{50}) is typically 0.0075-0.03 µg/mL in the presence of 10 ng/mL Recombinant Human NRG1-β1/HRG1-β1 Extracellular Domain.	

DATA

Neutralization



Cell Proliferation Induced by NRG1-β1/HRG1-β1 and Neutralization by Human ErbB3/Her3 Antibody. Recombinant Human NRG1-1β1/HRG1-1β1 (Catalog # 377-HB) stimulates proliferation in the MCF-17 human breast cancer cell line in a dose-dependent manner (orange line). Proliferation elicited by Recombinant Human NRG1-1β1/HRG1-1β1 (10 ng/mL) is neutralized (green line) by increasing concentrations of Human ErbB3/Her3 Monoclonal Antibody (Catalog # MAB3481). The ND_{50} is typically 0.0075-0.03 µg/mL.

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.

bio-techne®
Global bio-techne.com info@bio-techne.com techsupport@bio-techne.com TEL +1 612 379 2956
USA TEL 800 343 7475 Canada TEL 855 668 8722 China TEL +86 (21) 52380373
Europe | Middle East | Africa TEL +44 (0)1235 529449

Human ErbB3/Her3 Antibody

Monoclonal Mouse IgG_1 Clone # 66223

Catalog Number: MAB3481

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:

1. Kraus, M.H. *et. al.* (1989) Proc. Natl. Acad. Sci. USA **86**:9193.
2. Plowman, G.D. *et. al.* (1990) Proc. Natl. Acad. Sci. USA **87**:4905.
3. Carraway, K.L. 3rd *et. al.* (1994) J. Biol. Chem. **269**:14303.
4. Emkey, R. and C.R. Kahn (1997) J. Biol. Chem. **272**:31172.
5. Sundaresan, S. *et. al.* (1998) Endocrinology **139**:4756.
6. Hellyer, N.J. *et. al.* (1998) Biochem. J. **333**:757.
7. Schaefer, G. *et. al.* (1999) J. Biol. Chem. **274**:859.
8. Hellyer, N.J. *et. al.* (2001) J. Biol. Chem. **276**:42153.
9. Schlessinger, J. (2000) Cell **103**:211.
10. Daly, R.J. (1999) Growth Factors **16**:255.

bio-techne®
Global bio-techne.com info@bio-techne.com techsupport@bio-techne.com TEL +1 612 379 2956
USA TEL 800 343 7475 **Canada** TEL 855 668 8722 **China** TEL +86 (21) 52380373
Europe | Middle East | Africa TEL +44 (0)1235 529449