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INTERNATIONAL

New Item
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Receptor Tyrosine kinase selective antibodies

Anti-Phospho Human EGF-related Receptor 2/Phospho-c-Erb-2/neu antibodies (PHER-240AP or PErb-240AP)

The tyrosine kinase receptor erbB2, also known in humans as Her2, is a member of the epidermal growth factor receptor (EGFR or erbB1) family, which also includes erbB3 and erbB4 that are gene products of proto-oncogenes. Proto-oncogenes play an important role in normal proliferation of cells. The interaction of proto-oncogenes with other tumor suppressor proteins (P53, P14ARF etc.) determine the normal or abnormal course of cell cycle and cell division leading to uncontrolled cell proliferation (1). Her 2 is found on chromosome 17 and codes for a protein that serves as a cell surface receptor. Her protein family of receptor has 4 structurally similar members of membrane receptors that have intrinsic tyrosine kinase activity. These Her receptors working in concert, determine the regulation of cell growth and differentiation in a complex manner. Her-2 receptor is still considered to be an orphan receptor with no identifiable ligand. Her family receptors can form homo or hetero dimers with other compounds. The activation of these homo-heterodimeric complexes by ligand binding led to an activation of intrinsic tyrosine kinase activity that triggers a cascade of signal transduction activity in cell. Some of these signals are transduced across the cell membranes in to cytoplasm and triggers the gene activation. A better understanding of these receptors and identification of their respective ligands will greatly enhance our understanding of cell cycle and uncontrolled cell division as seen in cancerous tissues. Several steps in these pathways are currently being targeted for therapeutic intervention, including tyrosine kinase inhibitors. There are at least 2 humanized recombinant monoclonal antibodies (Trastuzumab and pertuzumab) that target extra cellular regions of the Her 2 tyrosine kinase receptor and have been used in human trials for the treatment of breast cancer (2).

Herceptin-2 is a 1342 amino acid protein (approximate MW 170-172 kDa) when analyzed on reduced SDS-PAGE gels. Her2 is over expressed in cells of many cancer types. It's over expression is nicely correlated with a poor prognosis of breast and ovarian cancer in patients. ErbB receptors bind to a family of growth factors, termed neuregulins/hereregulin (NRG/HRG), which comprise NRG-1, -2, -3, and -4 and include multiple variants. ErbB2/Her2 is an orphan receptor that does not bind ligand alone but heterodimerizes with the other erbB receptors for NRG signaling. Her 2 is a receptor tyrosine kinase with intrinsic tyrosine kinase domain. This new Phospho-Her2 antibody (PHER-240AP) is made against the phospho-Tyrosine containing peptide (aa 1127-1138) from rat Her2 protein.

The Anti-phospho-HER2-selective antibodies were generated against a conserved sequence near the C-terminal that is unique to HER2 protein. The polyclonal antibody strongly labels a 172kDa protein in several breast cancer cells. Anti-phospho-HER2-selective antibody is also available in affinity-purified form for confocal, Western blotting and immunocytochemical analyses. FabGennix Inc. will also conjugate antibodies with fluorescent probes upon request at extra charge. FabGennix, Inc., will also provide Western blot positive controls for Her-201AP and Phospho-Her-240AP antibodies in ready-to-use buffer for easy identification of respective proteins. Limited quantities of antigens are also available. Please inquire for their availability before ordering.

Catalog #	Host Species	Nature	Cross reactivity	Quantity	Price
PHER-204AP	Rabbit	Affinity purified Phospho-HER2 /Erb2 antibodies	R, M, H	100 µl	285
P-HER2	Rabbit	Non-Blocking peptide for PHER-240AP	n/a	250 µg	115
P-PHER2	n/a	Antigenic blocking peptide for PHER-240AP	n/a	250 ug	145
PC-PHer2	n/a	Western blot positive octrl	For 5 applications	250 ul	185

R = rat; M = mouse; H = human; C = chicken; monk = monkey ; * not all variants are labeled equally

Immunogen: Synthetic peptide for PHER2: (ETD GY(p)V APL AC)

Concentration: Her-240AP IgG concentration 0.65-0.75 mg/ml.

Applications: Antibody HER-240AP is ideal for IMM, WB applications, use in IHC is not determined. The dilutions for this antibody is for reference only, investigators are expected to determine the optimal conditions for specific assay. WB; 1:500; IMM & i.p pull-down assays:> 1:200 (1 ul/250 ug protein extracts)

Reactivity: This antibody detects a band at 172-174kDa Her2 protein in WB blot positive controls.

Protocols: Standard protocol for various applications (WB, IMM and IHC) of this antibody is provided with the product specification sheet, however, FabGennix Int. Inc.

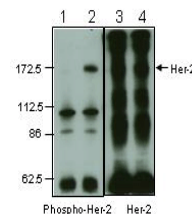
Form/Storage: The antiserum is supplied in antibody stabilization buffer with 0.02% sodium azide. For long-term storage of antibodies, store at -20°C. FabGennix Int. Inc. does not recommend storage of very dilute antibody solutions unless they are prepared in specially formulated multi use antibody dilution buffer (Cat # DiUbuffer). Working solutions of antibodies in DiUbuffer should be filtered through 0.45µ filter after every use for long-term storage.

References:

1. D'Cruz PM, Yasumura D, Weir J, Matthes MT, Abderrahim H, LaVail MM, Vollrath D. Hum. Mol. Gen. 2000, 4, 645-651.
2. Nahta R, Hung MC, Esteva FJ. Cancer Res. 2004 Apr 1;64(7):2343-6.
3. Negro A, Brar BK, Lee KF. Recent Prog Horm Res. 2004;59:1-12.

Announcements: A new Her2/Erb2 Antibody (Cat # HER-201AP) is now available from FabGennix International Inc. This antibody is raised against a synthetic peptide corresponding to unique antigenic sequence on Her2/ErbB2 protein.

*For users who may require large amounts of MERTK-100P or MERTK-101AP, please enquire about bulk material discounts.
This Product is for Research Use Only and is NOT intended for use in humans or clinical diagnosis.



WB of PC-Her2 & Phospho-Her2 with Her-200P antibody. Ln: 1, 2. IP with Her-200P and WB with HER-140AP, Ln 3, 4: WB with HER-200P. Ln:1, 3 non active Her2, Ln:2, 4: Phospho-Her2.

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