## Anti-Phospho-HER2 / ErbB2 (T686) Antibody [4G3] RT1275

Product Type: Mouse monoclonal IgG1, primary antibodies

Species reactivity: Human, Mouse, Rat

Applications: WB, IP

Molecular Wt: 185kDa

Clone number: 4G3

**Description:** Neu (ErbB-2 erythroblastic leukemia viral oncogene homolog 2, HER-2, NGL, TKR1, c-erb

B2) oncogene was originally cloned from a rat neuroglioblastoma. Human Neu is referred to as HER-2 since the protein structure resembles human epidermal growth factor receptor (HER). ErbB-2 refers to a high level of similarity to ErbB (avian erythroblastosis oncogene B), later found to code for EGFR (HER). Tyr 1248-phosphorylated Neu localizes with Mucin 4/sialomucin complex at the apical surfaces of ductal and alveolar cells in rodent lactating gland. Phosphorylation of Neu at Tyr 1139 promotes association of GRB2 and GRB7 through an Src homology 2 (SH2) domain-dependent interaction and contributes to the etiology of certain breast, gastric and esophageal cancers and testicular germ cell tumors. Neu phosphorylation on Tyr 1221 and Tyr 1248 promotes association of Shc (SH2 domain-containing transforming protein 1) through an SH2 domain. Neu phosphorylation at Tyr 1196 and Tyr 1248 promotes association of Shc through a PTB (phosphotyrosine binding) domain. SH2 and PTB domains recognize tyrosine phosphorylated proteins in a sequence-specific fashion and transduce extracellular signals via subcellular targeting, directing

assembly of complexes and modulating enzymatic activity.

**Immunogen:** Amino acid residues surrounding Threonine 686 of Neu of human origin.

**Positive control:** A431, PMA, LPA, Ceramide, Bradykinin, Bombesin.

Subcellular location: Cytoplasm, Cell membrane, Nucleus

Database links: SwissProt: P04626 Human

**Recommended Dilutions:** 

**WB** 1:100-1:1,000

**IP** 1-2 μg per 100-500 μg of total protein(1 ml of cell lysate)

**Storage Buffer:** 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Storage Instruction: Store at +4 ℃

**Purity:** Protein A affinity purified.

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## Images



**Fig1:** Western blot analysis of Neu phosphorylation in serum starved A431 (A), and serum starved A431 treated for 15 minutes with PMA (B), LPA (C), Ceramide (D), Bradykinin (E) and Bombesin (F) whole cell lysates.

Note: All products are "FOR RESEARCH USE ONLY AND ARE NOT INTENDED FOR DIAGNOSTIC OR THERAPEUTIC USE".

## **Background References**

- 1. Xia, W., et al. 2004. Phosphorylation/cytoplasmic localization of p21Cip1/ WAF1 is associated with HER2/Neu overexpression and provides a novel combination predictor for poor prognosis in breast cancer patients. Clin. Cancer Res. 10: 3815-3824.
- 2. Thor, A.D., et al. 2000. Activation (tyrosine phosphorylation) of ErbB-2 (HER-2/Neu): a study of incidence and correlation with outcome in breast cancer. J. Clin. Oncol. 18: 3230-3239.