

# p-Neu (Tyr 1248): sc-293110

## BACKGROUND

Neu (*v-ErbB-2* erythroblastic leukemia viral oncogene homolog 2, *HER-2*, *NGL*, *TKR1*, *c-ErbB-2*) oncogene was originally cloned from a rat neuroglial-blastoma. Human Neu is referred to as *HER2* 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 a *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.

## CHROMOSOMAL LOCATION

Genetic locus: *ERBB2* (human) mapping to 17q12; *ErbB2* (mouse) mapping to 11 D.

## SOURCE

p-Neu (Tyr 1248) is a rabbit polyclonal antibody raised against a short amino acid sequence containing Tyr 1248 phosphorylated Neu of human origin.

## PRODUCT

Each vial contains 100 µg IgG in 1.0 ml PBS with < 0.1% sodium azide and 0.1% gelatin.

## STORAGE

Store at 4° C, **\*\*DO NOT FREEZE\*\***. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

## APPLICATIONS

p-Neu (Tyr 1248) is recommended for detection of Tyr 1248 phosphorylated Neu of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500).

Suitable for use as control antibody for Neu siRNA (h): sc-29405, Neu siRNA (m): sc-29406, Neu shRNA Plasmid (h): sc-29405-SH, Neu shRNA Plasmid (m): sc-29406-SH, Neu shRNA (h) Lentiviral Particles: sc-29405-V and Neu shRNA (m) Lentiviral Particles: sc-29406-V.

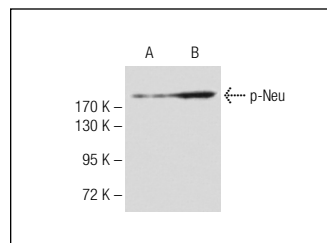
Molecular Weight of p-Neu: 185 kDa.

Positive Controls: A-431 whole cell lysate: sc-2201, MDA-MB-231 cell lysate: sc-2232 or SK-BR-3 cell lysate: sc-2218.

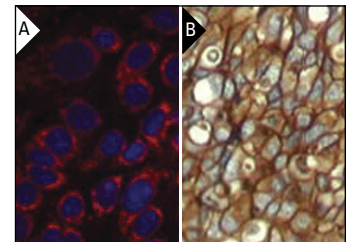
## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto B Blocking Reagent: sc-2335 (use 50 mM NaF, sc-24988, as diluent), Western Blotting Luminol Reagent: sc-2048 and Lambda Phosphatase: sc-200312A. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941. 4) Immunohistochemistry: use ImmunoCruz™: sc-2051 or ABC: sc-2018 rabbit IgG Staining Systems.

## DATA



p-Neu (Tyr 1248): sc-293110. Western blot analysis of Neu phosphorylation expression in untreated (A) and EGF treated (B) MDA whole cell lysates.



p-Neu (Tyr 1248): sc-293110. Immunofluorescence staining of methanol-fixed MCF7 cells (A) showing cytoplasmic and membrane localization and immunoperoxidase staining of formalin-fixed, paraffin-embedded human breast carcinoma tissue (B) showing cytoplasmic and membrane localization.

## SELECT PRODUCT CITATIONS

1. Pierpaoli, E., et al. 2013. Effect of annatto-tocotrienols supplementation on the development of mammary tumors in *HER-2/neu* transgenic mice. *Carcinogenesis* 34: 1352-1360.
2. Pierpaoli, E., et al. 2013. Antitumor effect of novel berberine derivatives in breast cancer cells. *Biofactors* 39:672-679.

## RESEARCH USE

For research use only, not for use in diagnostic procedures.

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.


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Try **p-Neu (6G7): sc-81507**, our highly recommended monoclonal alternative to p-Neu (Tyr 1248).