

p-Neu (Tyr 1248)-R: sc-12352-R

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 neuroglia-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 Mucin4/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 sub-cellular 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)-R is a rabbit polyclonal antibody raised against a short amino acid sequence containing Tyr 1248 phosphorylated Neu of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-12352 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

p-Neu (Tyr 1248)-R 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 solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

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.

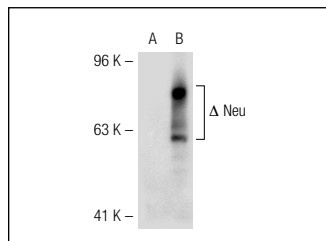
Molecular Weight of p-Neu: 185 kDa.

Positive Controls: Neu (m): 293T Lysate: sc-125694 or A-431 + EGF whole cell lysate: sc-2202.

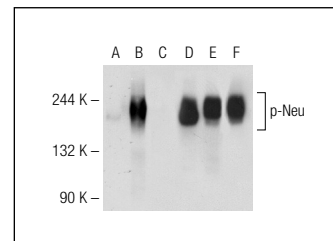
STORAGE

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

DATA



p-Neu (Tyr 1248)-R: sc-12352-R. Western blot analysis of Neu phosphorylation of non-transfected: sc-117752 (A) and truncated mouse Neu transfected: sc-125694 (B) 293T whole cell lysates.



Western blot analysis of Neu phosphorylation in untreated (A, D), EGF treated (B, E) and EGF and lambda protein phosphatase (sc-200312A) treated (C, F) A-431 whole cell lysates. Antibodies tested include p-Neu (Tyr 1248)-R: sc-12352-R (A, B, C) and Neu (C-18): sc-284 (D, E, F).

SELECT PRODUCT CITATIONS

1. Basso, A.D., et al. 2002. Ansamycin antibiotics inhibit Akt activation and cyclin D expression in breast cancer cells that overexpress HER2. *Oncogene* 21: 1159-1166.
2. Fichera, A., et al. 2007. Epidermal growth factor receptor signaling is required for microadenoma formation in the mouse azoxymethane model of colonic carcinogenesis. *Cancer Res.* 67: 827-835.
3. Contessa, J.N., et al. 2008. Inhibition of N-linked glycosylation disrupts receptor tyrosine kinase signaling in tumor cells. *Cancer Res.* 68: 3803-3809.
4. De Cecco, L., et al. 2009. Impact of biospecimens handling on biomarker research in breast cancer. *BMC Cancer* 9: 409.
5. McGuire, J.F., et al. 2009. Caveolin-1 and altered neuregulin signaling contribute to the pathophysiological progression of diabetic peripheral neuropathy. *Diabetes* 58: 2677-2686.
6. Bachawal, S.V., et al. 2010. Enhanced antiproliferative and apoptotic response to combined treatment of γ -tocotrienol with erlotinib or gefitinib in mammary tumor cells. *BMC Cancer* 10: 84.
7. Nardone, A., et al. 2011. Long-term cultures of stem/progenitor cells from lobular and ductal breast carcinomas under non-adherent conditions. *Cytotechnology* 63: 67-80.

RESEARCH USE

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



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