

p-Neu (14C3): sc-81506

BACKGROUND

Neu (v-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 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.

REFERENCES

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CHROMOSOMAL LOCATION

Genetic locus: ERBB2 (human) mapping to 17q12.

SOURCE

p-Neu (14C3) is a mouse monoclonal antibody raised against phosphopeptide corresponding to amino acid residues surrounding Tyrosine 1139 of Neu of human origin.

PRODUCT

Each vial contains 50 µg IgG₁ in 0.5 ml of PBS with < 0.1% sodium azide, 0.1% gelatin, PEG and sucrose.

APPLICATIONS

p-Neu (14C3) is recommended for detection of Tyr 1139 phosphorylated Neu of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000).

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

Molecular Weight of p-Neu: 138 kDa.

SELECT PRODUCT CITATIONS

1. Wang, J., et al. 2022. Disrupting circadian rhythm via the PER1-HK2 axis reverses trastuzumab resistance in gastric cancer. *Cancer Res.* 82: 1503-1517.

STORAGE

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

RESEARCH USE

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

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.