

Neu (C-18): sc-284

BACKGROUND

The EGF receptor family comprises several related receptor tyrosine kinases that are frequently overexpressed in a variety of carcinomas. Members of this receptor family include EGFR (HER1), Neu (ErbB-2, HER2), ErbB-3 (HER3), and ErbB-4 (HER4), which form either homodimers or heterodimers upon ligand binding. Neu, a glycoprotein, undergoes transactivation upon heterodimerization with other EGF receptor family members. Neu heterodimerization with ErbB-3 recruits heregulin, which induces phosphoinositide PI 3-kinase activation. Activation of Neu potentiates tumor cell motility and protease secretion and invasion, and also modulates cell cycle checkpoint function, DNA repair and apoptotic responses. Amplification and/or overexpression of Neu occurs in 20-30% of breast carcinomas. Measurement of increased Neu expression can be a predictor of disease prognosis. Neu may also prove to be a promising target for therapeutic agents.

CHROMOSOMAL LOCATION

Genetic locus: ERBB2 (human) mapping to 17q12, ERBB4 (human) mapping to 2q34; Erbb2 (mouse) mapping to 11 D, Erbb4 (mouse) mapping to 1 C3.

SOURCE

Neu (C-18) is available as either rabbit (sc-284) or goat (sc-284-G) affinity purified polyclonal antibody raised against a peptide mapping at the C-terminus of Neu of human origin.

PRODUCT

Each vial contains either 100 µg (sc-284) or 200 µg (sc-284-G) IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-284 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

Neu (C-18) is recommended for detection of Neu gp185 and ErbB-4 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), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Neu (C-18) is also recommended for detection of Neu gp185 and ErbB-4 in additional species, including equine.

Molecular Weight of Neu: 185 kDa.

Positive Controls: Neu (m): 293T Lysate: sc-125694, A-431 whole cell lysate: sc-2201 or NIH/3T3 whole cell lysate: sc-2210.

RESEARCH USE

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

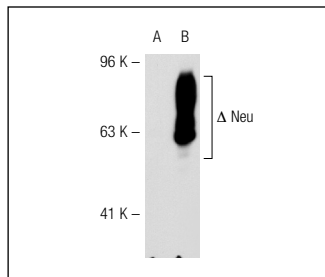
PROTOCOLS

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

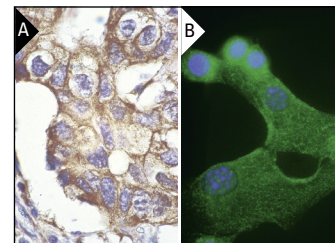
STORAGE

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

DATA



Neu (C-18): sc-284. Western blot analysis of Neu expression in non-transfected: sc-117752 (A) and truncated mouse Neu transfected: sc-125694 (B) 293T whole cell lysates.



Neu (C-18): sc-284. Immunoperoxidase staining of formalin-fixed, paraffin-embedded human breast carcinoma tissue showing membrane staining (A). Immunofluorescence staining of methanol-fixed NIH/3T3 cells. Note cytoplasmic and membrane fluorescein immunostaining and nuclear DAPI counterstain (B).

SELECT PRODUCT CITATIONS

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- Schillaci, R., et al. 2012. Clinical relevance of ErbB-2/HER2 nuclear expression in breast cancer. *BMC Cancer* 12: 74.
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- Gouttenoire, E.A., et al. 2013. Sh3tc2 deficiency affects neuregulin-1/ErbB signaling. *Glia* 61: 1041-1051.



Try **Neu (3B5): sc-33684** or **Neu (A-2): sc-393712**, our highly recommended monoclonal alternatives to Neu (C-18). Also, for AC, HRP, FITC, PE, Alexa Fluor[®] 488 and Alexa Fluor[®] 647 conjugates, see **Neu (3B5): sc-33684**.