

c-erbB-2 / HER-2 / neu Ab-1 (21N)**Rabbit Polyclonal Antibody****Cat. #RB-103-P0, -P1, or -P (0.1ml, 0.5ml, or 1.0ml at 1.0mg/ml)** (Purified Ab with BSA and Azide)**Cat. #RB-103-P1ABX or -PABX (0.5ml or 1.0ml at 1.0mg/ml)** (Purified Ab without BSA and Azide)**Cat. #RB-103-PCS (5 Slides)** (Positive Control for Histology)**Cat. #RB-103-PCL (0.1ml)** (Positive Control for Western Blot)**Cat. #PP-103** (Immunizing peptide; 1.0ml at 200µg/ml)

Description: *c-erbB-2*, second member (*c-erbB-2/HER-2/neu*) of the *c-erbB* family is a receptor tyrosine kinase. It exhibits extracellular domains with two cysteine-rich sequences, and a cytoplasmic tyrosine kinase domain flanked by large hydrophilic tails that carry several tyrosine autophosphorylation sites. Approximately 25% of primary breast and ovarian tumors were found to overexpress the protein

Comments: Polyclonal Ab-1 and monoclonal Ab-15 are raised against similar synthetic peptides. Both the Abs react equally well with wild and mutant (oncogenic) form *c-erbB-2* protein. For studies on murine *neu* protein, immunoprecipitate with Ab-9 or Ab-15 and Western blot with Ab-1 or vice versa.

Mol. Wt. of Antigen: 185kDa**Epitope:** C-terminal**Species Reactivity:** Human,¹ Monkey,¹ Rat,¹ and Mouse.¹ Others-not tested.**Designation:** 21N**Immunogen:** Synthetic peptide derived from C-terminus of human *c-erbB-2/HER-2* protein.¹ THIS SEQUENCE IS IDENTICAL IN RAT *NEU* PROTEIN.**Applications and Suggested Dilutions:**

- Western Blotting (5-10µg/ml for 2hrs at RT)
- Immunoprecipitation¹ (Use Protein A)
(Ab at 10µg/mg protein lysate)
- Immunohistology (Formalin/paraffin)
(Ab 2.5-5.0µg/ml for 30 min at RT)

*[Staining of formalin-fixed tissues REQUIRES boiling tissue sections in 10mM citrate buffer, pH 6.0, (Cat. #AP-9003), for 10-20 min followed by cooling at RT for 20 min.]

The optimal dilution for a specific application should be determined by the investigator.

Positive Control: SKBR-3 or T47D cells or breast carcinomas.**Cellular Localization:** Cell membrane**Supplied As:** Total IgG purified from rabbit anti-serum by Protein A chromatography. Prepared at 1mg/ml in 10mM PBS, pH 7.4, with 0.2% BSA & 0.09% azide. Also available without BSA and azide at 1mg/ml.**Storage and Stability:** Ab with sodium azide is stable for 24 months when stored at 2-8°C. Antibody WITHOUT sodium azide is stable for 36 months when stored at below 0°C.**Key References:**

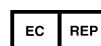
1. Gullick WJ, *et. al.* International Journal of Cancer, 1987, 40(2):246-54.

Limitations and Warranty:

Our products are intended FOR RESEARCH USE ONLY and are not approved for clinical diagnosis, drug use or therapeutic procedures. No products are to be construed as a recommendation for use in violation of any patents. NeoMarkers makes no representations, warranties or assurances as to the accuracy or completeness of information provided on our data sheets and website. Our warranty is limited to the price paid for the product. NeoMarkers is not liable for any property damage, personal injury, time or effort or economic loss caused by our products.

Material Safety Data:

This product is not licensed or approved for administration to humans or to animals other than the experimental animals. Standard Laboratory Practices should be followed when handling this material. The chemical, physical, and toxicological properties of this material have not been thoroughly investigated. Appropriate measures should be taken to avoid skin and eye contact, inhalation, and ingestion. The material contains 0.09% sodium azide as a preservative. Although the quantity of azide is very small, appropriate care should be taken when handling this material as indicated above. The National Institute of Occupational Safety and Health has issued a bulletin citing the potential explosion hazard due to the reaction of sodium azide with copper, lead, brass, or solder in the plumbing systems. Sodium azide forms hydrazoic acid in acidic conditions and should be discarded in a large volume of running water to avoid deposits forming in metal drainage pipes.

For Research Use Only

c-erbB-2 / HER-2 / neu Ab-1 (21N)**Rabbit Polyclonal Antibody****Cat. #RB-103-P0, -P1, or -P (0.1ml, 0.5ml, or 1.0ml at 1.0mg/ml)** (Purified Ab with BSA and Azide)**Cat. #RB-103-P1ABX or -PABX (0.5ml or 1.0ml at 1.0mg/ml)** (Purified Ab without BSA and Azide)**Cat. #RB-103-PCS (5 Slides)** (Positive Control for Histology)**Cat. #RB-103-PCL (0.1ml)** (Positive Control for Western Blot)**Cat. #PP-103** (Immunizing peptide; 1.0ml at 200µg/ml)**Additional Key References:**

1. Gasparini G; Gullick WJ; Maluta S; Palma PD; Caffo O; Leonardi E; Boracchi P; Pozza F; Lemoine NR; Bevilacqua P. c-erbB-3 and c-erbB-2 protein expression in node-negative breast carcinoma--an immunocytochemical study. *European Journal of Cancer*, 1994, 30A(1):16-22.

2. Coombs LM; Oliver S; Sweeney E; Knowles M. Immunocytochemical localization of c-erbB-2 protein in transitional cell carcinoma of the urinary bladder. *Journal of Pathology*, 1993, 169(1):35-42.

3. Schlegel J; Ullrich B; Stumm G; Gass P; Harwerth IM; Hynes NE; Kiessling M. Expression of the c-erbB-2-encoded oncoprotein and progesterone receptor in human meningiomas. *Acta Neuropathologica*, 1993, 86(5):473-9.

4. Soomro S; Taylor P; Shepard HM; Feldmann M; Sinnott HD; Shousha S. c-erbB-2 oncoprotein in screen-detected breast carcinoma: an immunohistological study. *International Journal of Cancer*, 1993, 55(1):63-5.

5. Allred DC; Clark GM; Molina R; Tandon AK; Schnitt SJ; Gilchrist KW; Osborne CK; Tormey DC; McGuire WL. Overexpression of HER-2/neu and its relationship with other prognostic factors change during the progression of in situ to invasive breast cancer. *Human Pathology*, 1992, 23(9):974-9.

6. Allred DC; Clark GM; Tandon AK; Molina R; Tormey DC; Osborne CK; Gilchrist KW; Mansour EG; Abeloff M; Eudey L; et al. HER-2/neu in node-negative breast cancer: prognostic significance of overexpression influenced by the presence of in situ carcinoma. *Journal of Clinical Oncology*, 1992, 10(4):599-605.

7. Gasparini G; Gullick WJ; Bevilacqua P; Sainsbury JR; Meli S; Boracchi P; Testolin A; La Malfa G; Pozza F. Human breast cancer: prognostic significance of the c-erbB-2 oncoprotein compared with epidermal growth factor receptor, DNA ploidy, and conventional pathologic features [see comments]. *Journal of Clinical Oncology*, 1992, 10(5):686-95.

8. Hilton DA; West KP. c-erbB-2 oncogene product expression and prognosis in gastric carcinoma. *Journal of Clinical Pathology*, 1992, 45(5):454-6.

9. Hitchcock A; Topham S; Bell J; Gullick W; Elston CW; Ellis IO. Routine diagnosis of mammary Paget's disease. A modern approach. *American Journal of Surgical Pathology*, 1992, 16(1):58-61.

10. Molina R; Ciocca DR; Tandon AK; Allred DC; Clark GM; Chamness GC; Gullick WJ; McGuire WL. Expression of HER-2/neu oncoprotein in human breast cancer: a comparison of immunohistochemical and western blot techniques. *Anticancer Research*, 1992, 12:1965-71.

11. Noguchi M; Koyasaki N; Ohta N; Kitagawa H; Earashi M; Thomas M; Miyazaki I; Mizukami Y. C-erbB-2 oncoprotein expression versus internal mammary lymph node metastases as additional prognostic factors in patients with axillary lymph node-positive breast cancer. *Cancer*, 1992, 69(12):2953-60.

12. Schroeter CA; De Potter CR; Rathsmann K; Willighagen RG; Greep JC. c-erbB-2 positive breast tumours behave more aggressively in the first years after diagnosis. *British Journal of Cancer*, 1992, 66(4):728-34.

13. Allred DC, Tandon AK, Clark GM, McGuire WL. HER-2/neu oncogene amplification and expression in human mammary carcinoma. *Biochemical and Molecular Aspects of Selected Cancer*, Vol. I (Chapter 3). TG Pretlow and TP Pretlow, eds. Academic Press, 1991, pp.75-97.

14. Barnes DM; Meyer JS; Gonzalez JG; Gullick WJ; Millis RR. Relationship between c-erbB-2 immunoreactivity and thymidine labelling index in breast carcinoma in situ. *Breast Cancer Research and Treatment*, 1991, 18(1):11-7.

15. Coombs LM; Pigott DA; Sweeney E; Proctor AJ; Eydmann ME; Parkinson C; Knowles MA. Amplification and over-expression of c-erbB-2 in transitional cell carcinoma of the urinary bladder. *British Journal of Cancer*, 1991, 63(4):601-8.



c-erbB-2 / HER-2 / neu Ab-1 (21N)**Rabbit Polyclonal Antibody****Cat. #RB-103-P0, -P1, or -P (0.1ml, 0.5ml, or 1.0ml at 1.0mg/ml)** (Purified Ab with BSA and Azide)**Cat. #RB-103-P1ABX or -PABX (0.5ml or 1.0ml at 1.0mg/ml)** (Purified Ab without BSA and Azide)**Cat. #RB-103-PCS (5 Slides)** (Positive Control for Histology)**Cat. #RB-103-PCL (0.1ml)** (Positive Control for Western Blot)**Cat. #PP-103** (Immunizing peptide; 1.0ml at 200µg/ml)

16. Hainsworth PJ; Henderson MA; Stillwell RG; Bennett RC. Comparison of EGFR, c-erbB-2 product and ras p21 immunohistochemistry as prognostic markers in primary breast cancer. European Journal of Surgical Oncology, 1991, 17(1):9-15.

17. Lovekin C; Ellis IO; Locker A; Robertson JF; Bell J; Nicholson R; Gullick WJ; Elston CW; Blamey RW. c-erbB-2 oncoprotein expression in primary and advanced breast cancer [published erratum appears in Br J Cancer 1991;64(1):202]. British Journal of Cancer, 1991, 63(3):439-43.

18. McCann AH; Dervan PA; O'Regan M; Codd MB; Gullick WJ; Tobin BM; Carney DN. Prognostic significance of c-erbB-2 and estrogen receptor status in human breast cancer. Cancer Research, 1991, 51(12):3296-303.

19. Soomro S; Shousha S; Taylor P; Shepard HM; Feldmann M. c-erbB-2 expression in different histological types of invasive breast carcinoma. Journal of Clinical Pathology, 1991, 44(3):211-4.

20. Winstanley J; Cooke T; Murray GD; Platt-Higgins A; George WD; Holt S; Myskov M; Spedding A; Barraclough BR; Rudland PS. The long term prognostic significance of c-erbB-2 in primary breast cancer. British Journal of Cancer, 1991, 63(3):447-50.

21. Bartkova J; Barnes DM; Millis RR; Gullick WJ. Immunohistochemical demonstration of c-erbB-2 protein in mammary ductal carcinoma in situ. Human Pathology, 1990, 21(11):1164-7.

22. Borg A, Tandon AK, Sigurdsson H, et al. HER-2/neu amplification predicts poor survival in node-positive breast cancer. Cancer Res 50: 4332-4337, 1990.

23. Haldane JS; Hird V; Hughes CM; Gullick WJ. c-erbB-2 oncogene expression in ovarian cancer. Journal of Pathology, 1990, 162(3):231-7.

24. Hall PA; Hughes CM; Staddon SL; Richman PI; Gullick WJ; Lemoine NR. The c-erb B-2 proto-oncogene in human pancreatic cancer. Journal of Pathology, 1990, 161(3):195-200.

25. McCann A; Dervan PA; Johnston PA; Gullick WJ; Carney DN. c-erbB-2 oncoprotein expression in primary human tumors. Cancer, 1990, 65(1):88-92.

26. Ramachandra S; Machin L; Ashley S; Monaghan P; Gusterson BA. Immunohistochemical distribution of c-erbB-2 in in situ breast carcinoma--a detailed morphological analysis. Journal of Pathology, 1990, 161(1):7-14.

27. Richner J; Gerber HA; Locher GW; Goldhirsch A; Gelber RD; Gullick WJ; Berger MS; Groner B; Hynes NE. c-erbB-2 protein expression in node negative breast cancer. Annals of Oncology, 1990, 1(4):263-8.

28. Gullick WJ; Berger MS; Bennett PL; Rothbard JB; Waterfield MD. Expression of the c-erbB-2 protein in normal and transformed cells. International Journal of Cancer, 1987 Aug 15, 40(2):246-54.

