

**MOUSE ANTI-NEURONAL NUCLEI (NeuN)
MONOCLONAL ANTIBODY**

CATALOG NO: MAB377

LOT NUMBER:

QUANTITY: 500 µg

CONCENTRATION: 1 mg/mL

SPECIFICITY: Vertebrate neuron-specific nuclear protein called NeuN (Neuronal Nuclei). MAB377 reacts with most neuronal cell types throughout the nervous system of mice including cerebellum, cerebral cortex, hippocampus, thalamus, spinal cord and neurons in the peripheral nervous system including dorsal root ganglia, sympathetic chain ganglia and enteric ganglia. The immunohistochemical staining is primarily in the nucleus of the neurons with lighter staining in the cytoplasm. The few cell types not reactive with MAB377 include Purkinje, mitral and photoreceptor cells.

Developmentally, immunoreactivity is first observed shortly after neurons have become postmitotic, no staining has been observed in proliferative zones.

The antibody is an excellent marker for neurons in primary cultures and in retinoic acid-stimulated P19 cells. It is also useful for identifying neurons in transplants.

IMMUNOGEN: Purified cell nuclei from mouse brain.

ISOTYPE: IgG₁

APPLICATIONS: Immunohistochemistry: 1:100-1:1,000. The antibody works best on polyester wax embedded tissue but also works on paraffin embedded tissue at a lower working dilution. The antibody works well with formaldehyde-based fixatives. Citric acid and microwave pretreatment has been used successfully (9).

Immunocytochemistry: 1:10-1:100. Neurons in culture should be permeabilized.

Immunoblotting. Recognizes 2-3 bands in the 46-48 kDa range and possibly another band at approximately 66 kDa.

Optimal working dilutions must be determined by end user.

SPECIES REACTIVITIES: Human, rat, mouse, ferret, chick and salamander.

FORMAT: Purified immunoglobulin

PRESENTATION: Liquid in 0.02M phosphate buffer, 0.25 M NaCl, pH 7.6 with 0.1% sodium azide.

STORAGE/HANDLING: Maintain at 2-8°C in undiluted aliquots for up to 6 months after date of receipt.

REFERENCES:

- 1) *Development* (1992) **116**:201-211.
- 2) *J. Histochem. Cytochem.* (1996) **44**:1167-1171.
- 3) *Nature* (1996) **383**:624-627.
- 4) *J. Neuroscience* (1997) **17**:5820-5829.
- 5) *J. Neuroscience* (1997) **17**:7415-7424.
- 6) *J. Neuroscience* (1998) **18**:3206-3212.
- 7) *J. Neuroscience* (1998) **18**:5614-5629.
- 8) *J. Neuroscience* (1998) **18**:7768-7778.
- 9) *Brain & Development* (1998) **20**:88-94.
- 10) *J. Cerebral Blood Flow and Metabolism* (1999) **19**:184-194.
- 11) *J. Cerebral Blood Flow and Metabolism* (1999) **19**:1220-1228.
- 12) Rubio, F.J, et al., *Gene Therapy* (1999) **6**:1851-1866.
- 13) Gould, E., et al., *Science* (1999) **286**:548-552.
- 14) Nichols, M., et al., *Science* (1999) **286**:1558-1561.
- 15) Justicia, C. et al., *Glia* (2000) **30**: 253-270.
- 16) Magavi, S. et al., *Nature* (2000) **405**: 951-955.
- 17) Rubio, F.V., et al., *Molecular and Cellular Neuroscience* (2000) **16**:1-13.
- 18) Brazelton, T.R., et al., *Science* (2000) **290**:1775-1779.
- 19) Mezey, E., et al., *Science* (2000) **290**:1779-1782.
- 20) Baekelandt, V., et al., *J. Virology* (2000) **74**:11278-11285.
- 21) Tikka, T., et al., *J. Neuroscience* (2001) **21**:2580-2588.
- 22) Solomon, I., et al., *J. Comparative Neurology* (2001) **440**:12-19.
- 23) Catapano, L.A., et al., *J. Neuroscience* (2001) **21**:8863-8872.
- 24) Andrae, J, et al., *Molecular and Cellular Neuroscience* (2001) **17**:1001-1013.
- 25) Kruger, G.M. et al., *Neuron* (2002) **35**:657-669.
- 26) Gorter, J.A. et al., *European Journal of Neuroscience* (2001) **13**:657-669.
- 27) Benn, S.C. et al., *Neuron* (2002) **36**:45-56.
- 28) Ji, R. et al., *Neuron* (2002) **36**:57-68.
- 29) Henshall, D.C. et al., *J. Neuroscience* (2002) **22**:8458-8465.
- 30) Chavez, J. and J. LaManna, *J. Neuroscience* (2002) **22**:8922-8931.
- 31) Ji, R-R, et al., *Neuron* (2002) **36**:57-68.
- 32) Zhu, D.Y., et al., *J. Neuroscience* (2003) **23**:223-229.
- 33) Liu, S., et al., *J. Neuroscience* (2003) **23**:in press.
- 34) Hafezparast, M., et al., *Science* (2003) **300**:808-812.
- 35) Tanaka, M., et al., (2003) *J. Neuroscience* **23**:2804-2814.
- 36) Herrera, D., et al., (2003) *PNAS* **100**:7919-7924.
- 37) Wang, J., et al., (2003) *Nature Neuroscience* **10**:1039-1047.
- 38) Kobayashi, M., et al., (2003) *J. Neuroscience* **23**:8471-8479.
- 39) Maxeiner, S., et al., *Neuroscience* (2003) **119**:689-700.
- 40) Solomon, I.C., *Respiratory Physiology & Neurobiology* (2003) **139**:1-20.
- 41) Stolt, C., et al., *Genes & Development* (2003) **17**:1677-1689.
- 42) Moreno-Lopez, B. et al., *J. Neuroscience* (2004) **24**:85-95.
- 43) Harry, G.J., et al., *Neurotoxicity Research* (2004) **5**:623-628.
- 44) Runyan, J. D., et al., *J. Neuroscience* (2004) **24**:1288-1295.
- 45) Romera, C., et al., *J. Neuroscience* (2004) **24**:1350-1357.
- 46) Tsutsui, S., et al., *J. Neuroscience* (2004) **24**:1521-1529.
- 47) Obrietan, K. and K. Hoyt, *J. Neuroscience* (2004) **24**:791-796.
- 48) Hantman, A.W. et al., *J. Neuroscience* (2004) **24**:836-842.
- 49) Zappone, C.A. and R. Sloviter, *J. Neuroscience* (2004) **24**:853-864.
- 50) Fricker-Gates, R.A., et al., *European Journal of Neuroscience* (2004) **19**:513-520.
- 51) Jakobsson, J., et al., *European Journal of Neuroscience* (2004) **19**:761-765.
- 52) Bloechlinger, S., et al., *European Journal of Neuroscience* (2004) **19**:1119-1132.
- 53) Sonntag, K., et al., *European Journal of Neuroscience* (2004) **19**:1141-1152.

- 54) Baquet, Z.C., et al., *Journal of Neuroscience* (2004) **24**:4250-4258.
- 55) Munoz-Elias, G., et al., *Journal of Neuroscience* (2004) **24**:4585-4595.
- 56) Pandey, S.C., et al., *Journal of Neuroscience* (2004) **24**:5022-5030.
- 57) Wernig, M. et al., *Journal of Neuroscience* (2004) **24**:5258-5268.
- 58) Okuno, S., et al., *Journal of Neuroscience* (2004) **24**:7879-7887.
- 59) Karbanova, J., et al., *Biomed. Papers* (2004) **148**:217-220.
- 60) Wen, Y., et al., *J. of Biological Chemistry* (2004) **279**:22684-22692.
- 61) Laufs, T.L., et al., *Neuroscience Letters* (2004) **362**:83-86.
- 62) Demeter, K., et al., *Experimental Neurology* (2004) **188**:254-267.
- 63) Bauer, S., et al., *Neuroscience* (2005) **130**:75-90.
- 64) Herculano-Houzel, S. and R. Lent, *Journal of Neuroscience* (2005) **25**:2518-2521.
- 65) Sigurjonsson, O., et al., *PNAS* (2005) **102**:5227-5232.
- 66) Frappart, P., et al., *Nature Medicine* (2005) **11**:538-544.
- 67) Peretto, P., et al., *J. Comparative Neurology* (2005) **487**:407-427.
- 68) Scheffler, B., et al., *PNAS* (2005) **102**:9353-9358.
- 69) Yang, P., et al., *J. Comparative Neurology* (2005) **490**:163-179.
- 70) Sasaki, T., et al., *Stroke* (2005) **36**:2457-2462.
- 71) Cummings, B., et al., *PNAS* (2005) **102**:14069-14074.
- 72) Harvey, B.D. and R. Sloviter J., *Comparative Neurology* (2005) **488**:442-463.
- 73) Butowt, R. and C. von Bartheld, *Molecular and Cellular Neuroscience* (2005) **29**:11-25.
- 74) Alonso-Nanclares, L. and J. DeFelipe, *Neuroscience* (2005) **134**:59-68.
- 75) Varea, E., et al., *Neuroscience* (2005) **136**:435-443.
- 76) Lin, C., et al., *PNAS* (2005) **102**:14877-14882.
- 77) Magvai, S., et al., *J. Neuroscience* (2005) **25**:10729-10729.
- 78) Mukoyama, Y., et al., *PNAS* (2006) **103**:1551-1556.
- 79) Bick-Sander, A., et al., *PNAS* (2006) **103**:3852-3857.
- 80) Zhao, B., et al., *Nature Medicine* (2006) **12**:441-445.
- 81) Ma, D.L., et al., *J Neuroscience Research* (2006) **83**:318-331.
- 82) Sakaguchi, M, et al., *PNAS* (2006) **103**:7112-7117.
- 83) Koizumi, H., et al., *Nature Neuroscience* (2006) **9**:779-786.
- 84) Goetz, A., et al., *PNAS* (2006) **103**:11063-11068.
- 85) Steele, A., et al., *PNAS* (2006) **103**:3416-3421.
- 86) Cardona, A., et al., *Nature Neuroscience* (2006) **9**:917-924.
- 87) Karsten, S., et al., *Neuron* (2006) **51**:549-560.
- 88) Casarejos, M.J., et al., *Journal Neurochemistry* (2006) **97**:934-946.
- 89) Heurteaux, C, et al., *Nature Neuroscience* (2006) **9**:1134-1141.
- 90) Hattiangady, B, et al., *Neuroscience* (2006) **139**:1369-1383.
- 91) Inda, M.C. et al., *Cerebral Cortex* (2006) in press.

Unless otherwise stated in our catalog or other company documentation accompanying the product(s), our products are intended for research use only and are not to be used for any other purpose, which includes but is not limited to, unauthorized commercial uses, in vitro diagnostic uses, ex vivo or in vivo therapeutic uses or any type of consumption or application to humans or animals.