



Anti Nitrotyrosin Monoclonal Antibody (Clone No. 2H1)

To elucidate the function of Nitric Oxide (NO) related signal transduction, we developed new monoclonal antibody to Nitrotyrosin (Clone No.2H1). There are two pathways, which is engaged in the signal transduction regarding vascular relaxation on endothelial cell. One is through activated guanylate cyclase that is cGMP dependent and another is cGMP independent pathway which requires reactive NO derived substance such as, peroxynitrate(ONOO^-), N_2O_3 , $\text{N}_2\text{O}_4(\text{NO}_2)$.

Recently, various functions of reactive NO derived substance has been identified for example regulating protein phosphorylation and inducing apoptosis. So, it is believed that reactive NO derived substance is involved in signal transduction among cells. Immunohistochemical study revealed that nitrotyrosin residue is produced in some patient such as atherosclerosis, Alzheimer's disease, Parkinson's disease, and acute lung damage.

This antibody is very useful for the research of reactive NO derived substance.

Package Size	100 μ g (400 μ L / vial)
Format	Mouse monoclonal antibody 0.25mg/mL
Buffer	PBS [containing 2% Block Ace as a stabilizer, 0.1% Proclin as a bacteriostat]
Storage	Store below -20°C Once thawed, store at 4°C . Repeated freeze-thaw cycles should be avoided
Clone No.	2H1
Subclass	IgG1
Purification method	The spleen cells from BALB/c mouse, immunized with nitrotyrosin-HSA, were fused to myeloma P3U1 cells. The screening of the hybridoma cells was performed on ELISA. The cell line was grown on non-serum medium, from which the antibody was purified by Protein G affinity chromatography.



Anti Nitrotyrosin Monoclonal Antibody (Clone No. 2H1)

【Reference】

1. Furchgott, R. F. *Acta Physiol. Scand* 139, 257-70, 1990
2. Moncada, S. & Higgs, A. *N. Eng. J. Med* 329, 2002-12, 1993
3. Ischiropoulos, H. *Arch. Biochem. Biophys* 356, 1-11, 1998
4. Stamler, J. S., Toone, E. J., Lipton, S. A. & Sucher, N. J. *Neuron* 18, 691-6, 1997
5. Akaike, T., et al. *J. biochem* 122, 459-66, 1997
6. Beckman, J. S., Ye, Y. Z., et al. : Extensive nitration of protein tyrosines in human atherosclerosis detection by immunohistochemistry. *Biol. Chem. Hoppe-Seyler* 375, 81-88, 1994
7. J. S. Luoma, P. Stralin, et al. : Expression of extracellular SOD and iNOS in macrophages and smooth muscle cells in human and rabbit atherosclerotic lesions. Colocalization with epitopes characteristic of oxidized LDL and peroxynitrite-modified proteins. *Atheroscler. Thromb. Vasc. Biol* 18, 157-167, 1998
8. P. F. Good, P. Werner, et al. : Evidence for neuronal oxidative damage in Alzheimer's disease. *Am. J. Pathol* 149, 21-28, 1996
9. P. F. Good, A. Hsu, et al. : Protein nitration in Parkinson's disease. *Journal of Neurophthology and Experimental Neurology* 57, 338-342, 1997
10. I.G.Haddad, G. Pataki, et al. : Quantitation of nitrotyrosine levels in lung section of patients and animals with acute lung injury. *J. Clin. Invest* 94, 2407-2413, 1994
11. Ryoji Nagai, Seikoh Horiuchi, et al. : Peroxynitrite Induces Formation of N^ε-(Carboxymethyl) Lysine by the Cleavage of Amadori Product and Generation of Glucosone and Glyoxal From Glucose. *Diabetes* 51: 2833-2839, 2002

Manufacturer

**Medicinal Chemistry Pharmaceutical Co., Ltd.**

Kobe Research Institute

7-1-14 Minatojima-minami-machi, Chuo-ku, Kobe, Japan 650-0047

Telephone: +81-78-945-7075 FAX: +81-78-306-0694

URL: <https://soyaku.co.jp/english/> tech-kobe@soyaku.co.jp

Previous manufacturer

**Trans Genic Inc.**