

# Nitrotyrosine (2A12): sc-65384

## BACKGROUND

Nitrotyrosine is a marker for inflammation and nitric oxide (NO) production and is formed in the presence of the active metabolite NO. Because nitrotyrosine is a stable product of multiple pathways, such as the formation of peroxynitrite, its plasma concentration may be a useful determinant of NO-dependent damage *in vivo*. Nitrotyrosine has been detected in inflammatory processes such as septic shock, rheumatoid arthritis, celiac disease, atherosclerotic plaques and chronic renal failure.

## REFERENCES

1. ter Steege, J., et al. 1997. Presence of inducible nitric oxide synthase, Nitrotyrosine, CD68, and CD14 in the small intestine in celiac disease. *Lab Invest.* 77: 29-36.
2. Buijn, L.I., et al. 1997. Elevated free Nitrotyrosine levels, but not protein-bound Nitrotyrosine or hydroxyl radicals, throughout amyotrophic lateral sclerosis (ALS)-like disease implicate tyrosine nitration as an aberrant *in vivo* property of one familial ALS-linked superoxide dismutase 1 mutant. *Proc. Natl. Acad. Sci. USA* 94: 7606-7611.
3. ter Steege, J.C., et al. 1998. Nitrotyrosine in plasma of celiac disease patients as detected by a new sandwich ELISA. *Free Radic. Biol. Med.* 25: 953-963.
4. Viera, L., et al. 1999. Immunohistochemical methods to detect Nitrotyrosine. *Methods Enzymol.* 301: 373-381.
5. Xu, J., et al. 2001. iNOS and Nitrotyrosine expression after spinal cord injury. *J. Neurotrauma* 18: 523-532.
6. Girault, I., et al. 2001. Immunodetection of 3-Nitrotyrosine in the liver of zymosan-treated rats with a new monoclonal antibody: comparison to analysis by HPLC. *Free Radic. Biol. Med.* 31: 1375-1387.
7. Ogino, K., et al. 2002. Immunohistochemical artifact for Nitrotyrosine in eosinophils or eosinophil containing tissue. *Free Radic. Res.* 36: 1163-1170.
8. Rhyu, D.Y., et al. 2002. Prevention of peroxynitrite-induced renal injury through modulation of peroxynitrite production by the Chinese prescription Wen-Pi-Tang. *Free Radic. Res.* 36: 1261-1269.
9. Lorch, S.A., et al. 2003. Plasma 3-Nitrotyrosine and outcome in neonates with severe bronchopulmonary dysplasia after inhaled nitric oxide. *Free Radic. Biol. Med.* 34: 1146-1152.

## SOURCE

Nitrotyrosine (2A12) is a mouse monoclonal antibody raised against 3-Nitrotyrosine.

## PRODUCT

Each vial contains 100 µg IgG<sub>1</sub> in 1.0 ml of PBS with < 0.1% sodium azide, 0.1% gelatin and < 1% glycerol.

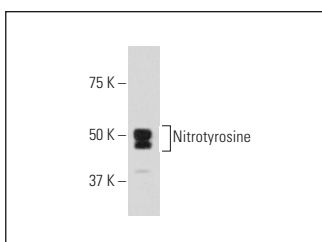
## STORAGE

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

## APPLICATIONS

Nitrotyrosine (2A12) is recommended for detection of nitrosylated tyrosine containing proteins by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) and immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)].

## DATA



Nitrotyrosine (2A12): sc-65384. Western blot analysis of Nitrotyrosine expression in rat brain tissue extract.

## SELECT PRODUCT CITATIONS

1. Yu, G., et al. 2018. Inhibition of myeloperoxidase by N-acetyl lysyltyrosyl-cysteine amide reduces oxidative stress-mediated inflammation, neuronal damage, and neural stem cell injury in a murine model of stroke. *J. Pharmacol. Exp. Ther.* 364: 311-322.

## RESEARCH USE

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

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) for detailed protocols and support products.



See **Nitrotyrosine (39B6): sc-32757** for Nitrotyrosine antibody conjugates, including AC, HRP, FITC, PE, and Alexa Fluor® 488, 546, 594, 647, 680 and 790.