

Nitrotyrosine (PNK): sc-55256

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.

SOURCE

Nitrotyrosine (PNK) is an affinity purified rabbit polyclonal antibody raised against 3-Nitrotyrosine.

PRODUCT

Each vial contains 100 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

Nitrotyrosine (PNK) is recommended for detection of nitrosylated tyrosine containing proteins 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Positive Controls: rat brain extract: sc-2392 or mouse lung extract: sc-2390.

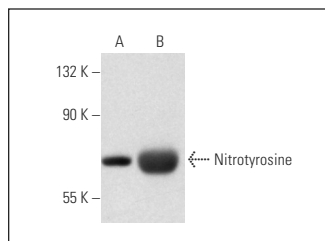
RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

STORAGE

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

DATA



Nitrotyrosine (PNK): sc-55256. Western blot analysis of Nitrotyrosine expression in rat brain (A) and mouse lung (B) tissue extracts.

SELECT PRODUCT CITATIONS

1. Cheung, A.K., et al. 2005. Aldose reductase deficiency prevents diabetes-induced blood-retinal barrier breakdown, apoptosis, and glial reactivation in the retina of db/db mice. *Diabetes* 54: 3119-3125.
2. Feridooni, T., et al. 2011. Cardiomyocyte specific ablation of p53 is not sufficient to block doxorubicin induced cardiac fibrosis and associated cytoskeletal changes. *PLoS ONE* 6: e22801.
3. Ghosh, S., et al. 2011. Altered glutathione homeostasis in heart augments cardiac lipotoxicity associated with diet-induced obesity in mice. *J. Biol. Chem.* 286: 42483-42493.
4. Patruno, A., et al. 2012. Activity of matrix metallo proteinases (MMPs) and the tissue inhibitor of MMP (TIMP)-1 in electromagnetic field-exposed THP-1 cells. *J. Cell. Physiol.* 227: 2767-2774.
5. Patruno, A., et al. 2012. Novel aminobenzyl-acetamide derivative modulate the differential regulation of NOSs in LPS induced inflammatory response: role of PI3K/Akt pathway. *Biochim. Biophys. Acta* 1820: 2095-2104.
6. Kung, M.L., et al. 2015. Enhanced reactive oxygen species overexpression by CuO nanoparticles in poorly differentiated hepatocellular carcinoma cells. *Nanoscale* 7: 1820-1829.
7. Conceicao, E.P., et al. 2015. Early redox imbalance is associated with liver dysfunction at weaning in overfed rats. *J. Physiol.* 593: 4799-4811.

RESEARCH USE

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



Try **Nitrotyrosine (39B6): sc-32757** or **Nitrotyrosine (6D611): sc-71705**, our highly recommended monoclonal alternatives to Nitrotyrosine (PNK). Also, for AC, HRP, FITC, PE, Alexa Fluor[®] 488 and Alexa Fluor[®] 647 conjugates, see **Nitrotyrosine (39B6): sc-32757**.