

Nitrotyrosine (18G4): sc-65385

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

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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. *Meth. 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.

SOURCE

Nitrotyrosine (18G4) is a mouse monoclonal antibody raised against 3-Nitrotyrosine.

PRODUCT

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

APPLICATIONS

Nitrotyrosine (18G4) is recommended for detection of nitrated 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)].

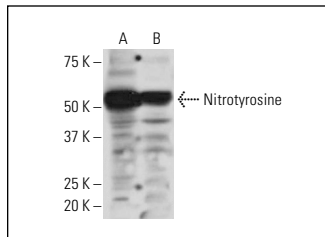
STORAGE

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

RESEARCH USE

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

DATA



Nitrotyrosine (18G4): sc-65385. Western blot analysis of Nitrotyrosine expression in mouse brain (A) and rat brain (B) tissue extract.

SELECT PRODUCT CITATIONS

1. Lakshmanan, A.P., et al. 2011. Curcumin attenuates hyperglycaemia-mediated AMPK activation and oxidative stress in cerebrum of streptozotocin-induced diabetic rat. *Free Radic. Res.* 45: 788-795.
2. Xiao, N., et al. 2013. Roles of polyuria and hyperglycemia in bladder dysfunction in diabetes. *J. Urol.* 189: 1130-1136.
3. Lu, G., et al. 2015. Myeloid cell-derived inducible nitric oxide synthase suppresses M1 macrophage polarization. *Nat. Commun.* 6: 6676.
4. Dolunay, A., et al. 2016. Inhibition of NLRP3 inflammasome prevents LPS-induced inflammatory hyperalgesia in mice: contribution of NFκB, caspase-1/11, ASC, NOX, and NOS isoforms. *Inflammation* 2016: 1-21.
5. Herrera, E.A., et al. 2016. N-acetyl cysteine, a glutathione precursor, reverts vascular dysfunction and endothelial epigenetic programming in intrauterine growth restricted guinea pigs. *J. Physiol.* 595: 1077-1092.
6. Colciaghi, F., et al. 2019. Targeting PSD95-nNOS interaction by Tat-N-dimer peptide during status epilepticus is neuroprotective in MAM-pilocarpine rat model. *Neuropharmacology* 153: 82-97.
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CONJUGATES

See **Mucin 5AC (45M1): sc-21701** for Mucin 5AC antibody conjugates, including AC, HRP, FITC, PE, and Alexa Fluor[®] 488, 546, 594, 647, 680 and 790.