PRODUCT INFORMATION

Nitrotyrosine Polyclonal Antibody
Item No. 10189540

Overview and Properties

Contents: This vial contains affinity-purified IgG lyophilized from TBS, pH 7.4. Resuspend the IgG in 500 µl of distilled water. Sufficient antibody is provided for 10 western blots.

Synonym: NT

Immunogen: Peroxynitrite-treated KLH

Storage: -20°C (as supplied)

Stability: As supplied, 2 years from the QC date provided on the Certificate of Analysis, when stored properly

Host: Rabbit

Applications: Western blot (WB); the recommended starting dilution for WB is 1:200. Other applications were not tested, therefore optimal working concentration/dilution should be determined empirically.

Image

Lane 1: BSA (1 µg)
Lane 2: Nitrotyrosine BSA (0.01 µg)
Lane 3: Nitrotyrosine BSA (0.025 µg)
Lane 4: Nitrotyrosine BSA (0.05 µg)
Lane 5: Nitrotyrosine BSA (0.1 µg)
Lane 6: Nitrotyrosine BSA (0.2 µg)
Nitric oxide (NO) is a product of the enzymatic conversion of arginine to citrulline by nitric oxide synthase. NO reacts rapidly with superoxide (\(6.7 \times 10^9 \text{ M}^{-1} \text{sec}^{-1}\)) to form peroxynitrite. At physiological pH and in the presence of transition metals, peroxynitrite undergoes heterolytic cleavage to form hydroxyl anion and nitronium ion, the latter of which nitrates protein tyrosine residues. Thus, the presence of nitrotyrosine on proteins can be used as a marker for peroxynitrite formation \textit{in vivo}.\textsuperscript{1,2} Nitrotyrosine has been shown to be present in proteins from a variety of clinical conditions including atherosclerotic lesions of human coronary arteries, postischemic heart, and placenta during preeclampsia.\textsuperscript{3,5} Increased nitration of proteins in motor neurons has been identified in patients with ALS (amyotrophic lateral sclerosis) and may be due to mutations in superoxide dismutase.\textsuperscript{2,6-8}

References