

## Anti Nitrotyrosine

# Product of the Month

Test our anti Nitrotyrosine antibody clones 6B2-3G2 and 2E11-3D3!

30%\*

A large number of physiological and pathological events lead to so-called stress conditions to which the organism can adapt within certain limits by regulating the activity of a series of enzymatic cascades. Most stress responses are characterized by an increased generation of free radicals which encompass both reactive oxygen (ROS) and nitrogen species (RNS). Most of these species react with macromolecules of the organism, e. g. amino acids, proteins, lipids and DNA, leading to functional alterations which can either participate to adaptation or lead to cell death. Indeed,  $O_2^-$  very rapidly reacts with NO and therefore, as long as the NO/ $O_2^-$  ratio is  $\geq 1$ ,  $O_2^-$  will preferably react with NO rather than with macromolecules, thus generating reactive nitrogen species (RNS): nitrosonium ( $NO^+$ ),  $N_2O_3$  and peroxynitrite ( $ONOO^-$ ). These RNS induce posttranslational modifications: for  $NO^+$  and  $N_2O_3$ , S-nitrosation (Cys-SNO) and for  $ONOO^-$ , tyrosine nitration (Tyr- $NO_2$ ), methionine sulfoxidation (Met-SOH) and thiol oxidation (RS-S-R).

Nitrotyrosine (3-Nitrotyrosine) is a product of tyrosine nitration mediated by RNS such as peroxy-nitrite anion and nitrogen dioxide. Nitrotyrosine

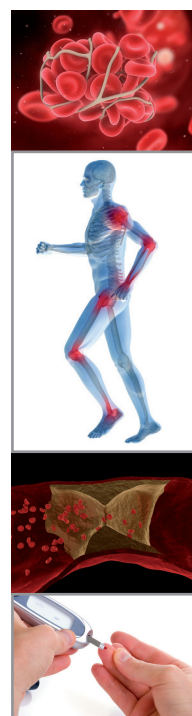
is a marker of NO-dependent, RNS-induced nitrate stress found in many pathological conditions such as arteriosclerosis, inflammatory processes, diabetes or lung diseases.

Clones 6B2-3G2 and 2E11-3D3 are characterized by a high affinity and specificity towards Tyr- $NO_2$  residues. There is no crossreaction with tyrosine or tyrosine derivatives such as aminotyrosine, chlorotyrosine, phosphotyrosine or nitrotryptophane. These antibodies have shown to recognize nitrated proteins including albumin, ovalbumin, insulin, hemoglobin, KLH and various cytoplasmic and mitochondrial proteins.

Clones 6B2-3G2 and 2E11-3D3 are suitable for use in ELISA, Western blot and IP application!

*García-Heredia JM et al. (2010): Nitration of tyrosine 74 prevents human cytochrome c to play a key role in apoptosis signaling by blocking caspase-9 activation. Biochim Biophys Acta, 1797(6-7): 981-993. [PMID: 20227384]*

*Csibi A et al. (2010): Angiotensin II inhibits insulin-stimulated GLUT4 translocation and Akt activation through tyrosine nitration-dependent mechanisms. PLoS One, 7;5(4): e10070. [PMID: 20383279]*



## Product of the Month

**Mar** anti rat FDC clone ED5  
**Apr** anti Nitrotyrosine  
**May** anti GFP  
**Jun** anti GAPDH

Special 'ProMo' offer within April 2012:  
 Receive 30% discount\* on anti Nitrotyrosine clone 2E11-3D3, Cat.-No. AM31825PU-N/-S clone 6B2-3G2, Cat.-No. AM31824PU-N/-S!

\* Valid within April 2012; does not apply to bulk orders; no additional discounts apply; as long as stock lasts

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