Anti-Nitrotyrosine Antibody

CATALOG NO: A1300-50

AMOUNT: 50 µg

HOST/ISOTYPE: Mouse IgG1

CLONALITY: Monoclonal

CLONE: 6B2

SPECIES REACTIVITY: Human, Mouse, Rat

SPECIFICITY: Antibody specific of nitrotyrosine either free or incorporated in proteins such as human serum nitro albumin, nitro haemoglobin and nitro insulin. Reactivity against all species

PURIFICATION: The antibody was purified by affinity chromatography on Protein A

FORM: Liquid

FORMULATION: Phosphate Buffered Saline 10 mM NaCl 0.15 M pH 7.4– Thimerosal 0.01% may be used as preservative

STORAGE CONDITIONS: Shipped at 4°C. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles

DESCRIPTION: Oxidative stress has different functional consequences depending not only upon its intensity and duration, but also upon the nature of the free radicals, ROS or RNS, generated. Interestingly, the nature of these reactive species depends on the ratio between the initially produced ROS, superoxide anion (O2.-), and nitric oxide (NO). Indeed, O2.- very rapidly reacts with NO and therefore, as long as the NO/ O2.- ratio is ≥ 1, O2.- will therefore preferentially react with NO rather than with macromolecules, thus generating reactive nitrogen species (RNS): nitrosonium (NO+), N2O3 and peroxinitrite (ONOO-). These RNS induce posttranslational modifications: for NO+ and N2O3, S-nitrosation (Cys-SNO) and for ONOO-, tyrosine nitration (Tyr-NO2), methionine sulfoxidation (Met-SOH) and thiol oxidation (RS- S-R). When the O2.-/NO ratio becomes > 1, the O2.- and NO.2 ions and thereafter the OH. radicals, cause irreversible oxidations and peroxidations of macromolecules which generally lead to cell death(1-4). The monoclonal antibodies have been selected for their high affinity and specificity towards Tyr-NO2 residues. They do not cross-react with Tyr or Tyr derivatives such as aminotyrosine, chlorotyrosine or phosphotyrosine , neither with nitroTrp which can also be generated in response to peroxynitrite. They also recognize Tyr-NO2 residues in various sequences as shown by their ability to recognize nitrated proteins including albumin, ovalbumin, insulin, hemoglobin, KLH and various cytoplasmic and mitochondrial proteins.

APPLICATION: WB; 1:10,000 – 1:20,000
ELISA; 1:50,000 – 1:80,000
IF; 1:500 – 1:1,000

Note: This information is only intended as a guide. The optimal dilutions must be determined by the user.

RELATED PRODUCTS:

- Anti-5-Methylcytosine Antibody **(Cat. No. A1294-50)**
- Anti-5-Hydroxymethylcytosine Antibody **(Cat. No. A1295-50)**
- Anti-S1P1 Antibody **(Cat. No. A1296-50)**
- Anti-GRA1 Antibody **(Cat. No. A1297-50)**
- Anti-GRA5 Antibody **(Cat. No. A1299-50)**

FOR RESEARCH USE ONLY! Not to be used on humans.