Product Data Sheet

Goat Anti- 4- Hydroxynonenal (HNE) Polyclonal Antibody

CATALOG NUMBER: STA-034 **STORAGE:** -20ºC

QUANTITY AND CONCENTRATION: 100 µg of affinity purified antibody at 1 mg/mL in PBS, pH 7.2, containing 0.5 mM EDTA and 0.02% NaN_3
Note: slight precipitation in the tube is normal; centrifuge before use

SHELF LIFE: 1 year from date of receipt under proper storage conditions; aliquot to avoid multiple freeze thaw cycles

HOST SPECIES: Goat

IMMUNOGEN: HNE-KLH

SPECIFICITY: HNE-modified proteins

APPLICATION: Immunoblot (1:200 to 1:8000)
ELISA (1:200 to 1:8000)

Background

Lipid peroxidation is a well-defined mechanism of cellular damage in animals and plants. Lipid peroxides are unstable indicators of oxidative stress in cells that decompose to form more complex and reactive compounds such as Malondialdehyde (MDA) and 4-hydroxynonenal (4-HNE), natural bi-products of lipid peroxidation. Oxidative modification of lipids can be induced *in vitro* by a wide array of pro-oxidant agents and occurs *in vivo* during aging and in certain disease conditions. Measuring the end products of lipid peroxidation is one of the most widely accepted assays for oxidative damage. These aldehydic secondary products of lipid peroxidation are generally accepted markers of oxidative stress.

Both MDA and HNE have been shown to be capable of binding to proteins and forming stable adducts, also termed advanced lipid peroxidation end products. These modifications of proteins by MDA or HNE can cause both structural and functional changes of oxidized proteins.

Example of Results

The following figures demonstrate typical results. One should use the data below for reference only. This data should not be used to interpret actual results.

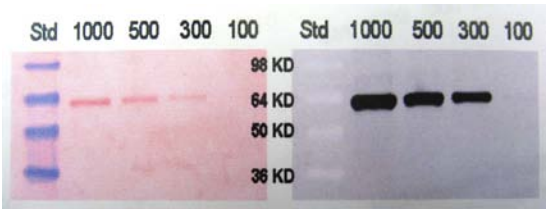

Figure 1. Immunoblot of HNE-Modified BSA. Left: Ponceau S staining. **Right:** Immunoblot using Goat Anti-HNE Polyclonal Antibody at 1:1000 dilution, followed by HRP-conjugated secondary antibody. Numbers indicate ng/lane.

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