

Malondialdehyde (MDA) Modified Human Apolipoprotein B-100

CATALOG NUMBER:	STA-211
STORAGE:	-20°C; aliquot to avoid freeze/thaw cycles
QUANTITY AND CONCENTRATION:	100 µg at 1.0 mg/mL in PBS, pH 7.2, containing 0.5 mM EDTA, 0.02% NaN ₃ and 50% glycerol
SHELF LIFE:	1 year from date of receipt under proper storage conditions
SOURCE:	Isolated from human plasma tested negative for Hepatitis surface antigens and HCV, HIV-I and HIV-II antibodies; purified by ultracentrifugation; water-soluble Apo-B-100 is prepared from delipidated LDL ¹ and modified with malondialdehyde
PURITY:	98% by SDS-PAGE

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.

References

1. Cardin, A.D. et al. (1982). *Biochemistry* **21(18)**: 4503-4511.

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