Antibodies

Data Sheet

4-HYDROXY-2-HEXENAL (4-HHE)

ANTIBODY, MONOCLONAL

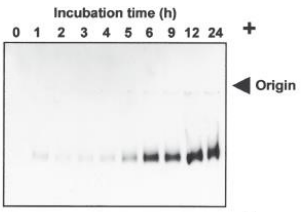
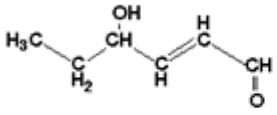


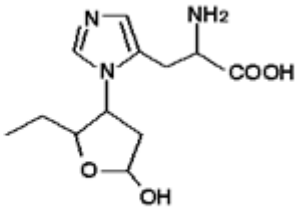
Figure 1: Western Blot analysis of HHE-histidine adduct formation by lipid peroxidation. BSA was incubated with 0.4 mM docosahexaenoic acid in the presence of 10 µM Cu^{2+} and 2 mM ascorbic acid in 50 mM PBS pH 7.2 at 37°C. The BSA was separated by SDS-PAGE and immunoblotted with AA1010 (1 µg/ml). AA1010 detects HHE-adducts with increasing incubation time.

Yamada S et al. (2004) J Lipid Res 45(4): 626-34.

Catalog no.:	AA1010.1
Immunogen:	HHE-modified KLH
Host:	Mouse Balb/c
Clone no.:	HHE53
Isotype:	$IgG_{1\ kappa}$
Matrix:	Ascites, Protein A purified, 10 mM PBS, 0.1% NaN_3, 0.5% BSA
Specificity:	HHE-modified protein, especially HHE-histidine Michael adduct



4-Hydroxy hexenal



HHE-his

Contents:	30 µg (frozen; 100 µg/ml)
Known applications:	ELISA (50 ng/ml)[1, 2], Western Blot (1 µg/ml)[1], immunohistochemistry (paraffin sections, 0.5 - 1 µg/ml; cryosections)[1, 2]

This antibody has not been tested for use in all applications. This does not necessarily exclude its use in non-tested procedures. The stated dilutions are recommendations only. End users should determine optimal dilutions in their system using appropriate negative/positive controls.

Store at:	-20 °C

Repeated thawing and freezing must be avoided

References:

1. Yamada S, Funada T, Shibata N, Kobayashi M, Kawai Y, Tatsuda E, Furuhata A, Uchida K (2004) Protein-bound 4-hydroxy-2-hexenal as a marker of oxidized n-3 polyunsaturated fatty acids. *J Lipid Res* **45**(4)**:** 626-634.

Immundiagnostik AG
Stubenwald-Allee 8a · 64625 Bensheim · Germany
Phone: +49 (0) 62 51/70 19 00 · Fax: +49 (0) 62 51/84 94 30 · info@immundiagnostik.com · www.immundiagnostik.com

2. Shibata N, Yamada S, Uchida K, Hirano A, Sakoda S, Fujimura H, Sasaki S, Iwata M, Toi S, Kawaguchi M, Yamamoto T, Kobayashi M (2004). Accumulation of protein-bound 4-hydroxy-2-hexenal in spinal cords from patients with sporadic amyotrophic lateral sclerosis. *Brain Res* **1019**(1-2)**:** 170-177.

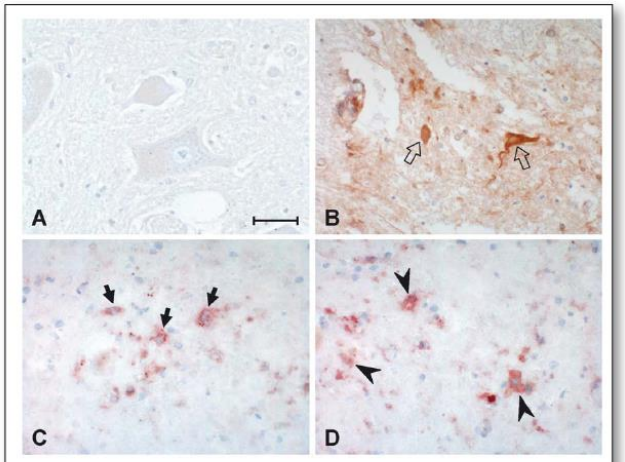


Figure 2: Immunhistochemistry image of HHE-histidine adduct staining in paraffin sections of spinal cords of amyotrophic lateral sclerosis (ALS) patients. Endogenous peroxidase activity was quenched by incubating the section for 10 min with 3% hydrogen peroxide. The section was incubated with AA1010 and detected using avidin-biotin-immunoperoxidase complex method and the Vectastain ABC kit (Vector Laboratories). **A.** Spinal cord from a control patient remained unstained. In ALS patients, HHE-reactivity was found in **B.** cytoplasm of lower motor neurons (open arrows), **C.** reactive astrocytes (closed arrows), and **D.** microglial cells (arrowheads). Scale bar = 50 µm.

Shibata N et al. (2004) Brain Res 1019(1-2):170-7.

Last updated on: 11 November 2021

For research use only

Publishing research using AA1010? Please let us know so that we can cite your publication as a reference.