ALPHA DIAGNOSTIC INTERNATIONAL

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Product Specification Sheet

4-Hydroxy-2-nonenal (HNE) Antibodies

Cat # HNE11-S	**Rabbit Anti-HNE antiserum**	**SIZE**: 100 ul
Cat # HNE12-C	**HNE-BSA Protein WB +ve control**	**SIZE**: 100 ul

HNE is a major product of endogenous lipid peroxidation. The w-6-family (linoleic and arachidonic acids) of polyunsaturated fatty acids may produce HNE as a result of free radical attack. HNE is a highly reactive compound and it can react with several functional groups on biological material, particularly sulfydryl groups to form thioester adduct and then hemiacetals. HNE may also react with histidine and lysine residues of proteins to form stable Michael addition-type of adducts. HNE-modified proteins may display an altered biological functions. Antibodies to HNE will help to visualize the HNE-adducts.

Source of Antigen, Antibodies, and controls

Free HNE (cat # HNE51-5) was coupled with KLH and antibodies (cat # HNE11-S) produced in **rabbits**. HNE was also coupled to BSA and used to coat the ELISA plate to check antibody titer.

Antigen	Free HNE (cat # HNE51-5) was coupled with KLH
Ab Host/type	Rabbit, Polyclonal antiserum # HNE11-S
2-Ab	Cat # 20320, goat anti-rabbit IgG-HRP (AP, biotin, FITC conjugates also available).
-ve control IgG	Cat # 20009-1, Rabbit (non-immune) Serum IgG, purified, suitable for ELISA, Western, IHC as –ve control

HNE-BSA conjugate (**cat #HNE12-C)** is supplied in 100 ul of SDS-PAGE sample buffer (reduced) and it is only suitable for Western blot +ve control. It cannot be used for ELISA etc. Load approx 10 ul/lane for blotting with antibodies (Cat # HNE11-S).. Loading volume may be adjusted depending upon the intensity of the band under actual experimental condition. BSA-HNE conjugate is approx. ~65-70 kda. Other aggregated bands may be visible as well. Store the conjugate in small aliquots at –20oC. Do not freeze and thaw.

Note: BSA-HNE conjugate should only be used as a positive control to optimize the bloting conditions. It is not a representative of the protein bands that might be labeled with the anti-HNE in a given samples. Typically, complex proteins samples, such as liver or brain, will show many bands that are modified with HNE. There is no specific pattern that must be obtained with the antibodies.

Form & Storage of Antibodies/Peptide Control

Antiserum (unpurified)
100ul solution lyophilized powder
Supplied 0.05% azide, **Reconstitute** powder in 100 ul PBS

Affinity pure IgG
100 ug/100ul solution lyophilized powder
Supplied in **Buffer**: PBS+0.1% BSA
Reconstitute powder in PBS at 1mg/ml

Control/blocking peptide
100 ug/100 ul solution lyophilized powder
Supplied in Buffer: PBS pH 7.5,
Reconstitute powder in PBS at 1 mg/ml.

Storage
Short-term: unopened, undiluted liquid vials at -20OC and powder at 4oC or -20oC..
Long-term: at –20C or below in suitable aliquots after reconstitution. Do not freeze and thaw and store working, diluted solutions.

Stability: 6-12 months at –20oC or below.
Shipping: 4oC for solutions and room temp for powder

Recommended Usage

It is recommended that researchers tests the antiserum, and controls and determine their own optimal condition. Rabbit Anti-HNE antiserum may diluted 1:500-1K or more **Western Blotting and histochemistry** and 1K-1:10K for **ELISA (see published refs)**

General References: (1) Yoritaka, A et al (1996) Proc. Natl. Acad. Sci. 93, 2696; Uchida, K. (1995) Arch Biochem. Biophys 324, 241; Quinn, MT et al (1995) J. Leukocyte Biol. 57, 415; Okamoto, K. (1994) Int. J. Cancer 58, 825; Uchida K et al (1993) PNAS 90, 8742.

Citations of for ADI Antibodies (see updated list at the web site)

Carter JE, 2002, **BBRC 297, 1062-1070**, IF/human and sheep lung cells/tissues
McKim SE, 2002, **Arch. Biochem. Biiophys. 406, 40-46**, IHC
Tsuneyama M eat al, 2002, **J of Hepatology 37, 176-183**, IHC
Ishigami A, 2003, **Legal Medicine in press 1-7 pages**, , IHC
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McKim SE, 2002, **Arch Biochem Biophy. 406, 40-46**, , IF/rat liver/diet studies
Kono, Hiroshi, 2001, **Am J Physiol Gastrointest Liver Physiol 280: G1178-G1186,**, IHC,
Kono H et al, 2001, **Free Radical Biology and Medicine, Volume 30, , Pages 403-411**, , IHC,
Tuder RM, 2003, **Am. J. Respir. Cell Mol. Biol., Jan 2003**; in press, IHC
Nyhlin N et al, 2002, **J Intern Med 2002; 251: 136-141,** IHC,
Tokunaga I, 2003,, **Legal Medicine in press 1-8 pages**, IHC

All products are for in vitro research use only.

Related products available from ADI….
Anti-MDA, Anti-HNE

HNE11-S-12-C 71214A

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