

Product Specification Sheet

**4-Hydroxy-2-nonenal (HNE) Antibodies**

Cat # HNE12-S	<b>Goat Anti-HNE antiserum</b>	<b>SIZE:</b> 100 ul
Cat # HNE12-C	<b>HNE-BSA protein WB +ve control</b>	<b>SIZE:</b> 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 sulfhydryl 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**

<b>Antigen</b>	Free HNE (cat # HNE51-5) was coupled with KLH
<b>Ab Host/type</b>	Goat, Polyclonal antiserum, purified over antigen-agarose (Cat # HNE12-S)
<b>2-Ab</b>	<b>Rabbit Anti-goat IgG-HRP conjugate</b> Cat # 30220 (AP, biotin, FITC conjugates also available)
<b>-ve control IgG</b>	<b># 20011-1, Goat (non-immune) IgG, purified, suitable for ELISA, Western, IHC as -ve control</b>

**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 or HNE12-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 blotting 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

**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 ADI's HNE antibodies** (see complete list at the web site).

Carter JE 2002 **BBRC 297, 1062-1070** IF/human and sheep lung cells/tissues  
McKim SE, 2002 **Arch. Biochem. Biophys. 406, 40-46** IHC  
Tsuneyama M et al 2002 **Journal of Hepatology 37, 176-183** IHC  
Ishigami A, 2003 **Legal Medicine in press 1-7 pages,** IHC  
Tsuneyama K et al 2002 **J Hepatology 37, 176-183,** IHC  
McKim SE, 2002 **Arch Biochem Biophys. 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**

**Western Blot Recycling Kit** (Re-use your blots in 15 mins.); Enhanced NuGlo Chemiluminescent Substrates

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