

Product Specification Sheet

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

<input type="checkbox"/> Cat # HNE13-M	<b>Mouse Monoclonal Anti-HNE IgG</b>	<b>SIZE:</b> 100 ul
<input type="checkbox"/> Cat # HNE11-C	<b>HNE-BSA Protein WB +ve control</b>	<b>SIZE:</b> 100 ul

HNE is a major product of endogenous lipid peroxidation. The ω-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**

Free HNE (cat # HNE51-5) was coupled with KLH and antibodies (cat # HNE13-M) produced in **mouse (IgG2b)**. HNE was also coupled to BSA and used to coat the ELISA plate to check antibody titer.

**Recommended 2-Ab**

**Goat Anti-Mouse IgG-HRP** cat # 40320 or anti-mouse IgG2b-HRP (#40128) (AP, biotin, FITC conjugates also available)

**Mouse IgG2b Isotype control (negative)**

20102-103	Mouse IgG2b isotype control, purified
20102-103-B	Mouse IgG2b-Biotin conjugate (control)
20102-103-F	Mouse IgG2b-FITC conjugate (isotype control)
20102-103-FP	Mouse IgG2b-FITC-PE conjugate (control)
20102-103-HP	Mouse IgG2b-HRP conjugate (isotype control)
20102-103-PC5	Mouse IgG2b-PE-Cy5 conjugate (control)
20102-103-PE	Mouse IgG2b-PE conjugate (isotype control)

**Form & Storage of Antibodies/Peptide Control**

**Purified IgG**

- 100 ul/vial       solution       lyophilized powder  
contains PBS+0.1% BSA +0.05% sodium azide  
**Reconstitute powder** in 100 ul PBS or water.

**Storage**

**Short-term:** unopened, undiluted vials for less than a week at 4oC.

**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.

**HNE-BSA conjugate (cat #HNE11-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 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. HNE-chemical conjugation also makes the protein move as diffuse and broad band.

**Recommended Usage**

It is recommended that researchers tests the antiserum, and controls and determine their own optimal condition.

**Western Blotting :mouse monoclonal is not recommended for western. Use rabbit poly#HNE11-S**

**Histochemistry:**1:100-1:500 using paraformaldehyde fixed cells and tissues.

**ELISA:**1:1500-:1:2000 in indirect ELISA using HNE-BSA coating antigen.

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

All products are for in vitro research use only.

**Related products available from ADI....**

**Anti-MDA, Anti-HNE, Anti-NITT, Anti-8OHG**  
HNE13-M 141119A

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