Antibodies

Data Sheet

4-HYDROXY-2-NONENAL (4-HNE)

ANTIBODY, MONOCLONAL

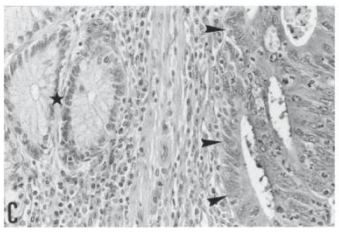

Figure 1: Immunohistochemistry image of 4-HNE staining in paraffin section of colorectal adenocarcinoma. Antigen retrieval was performed in 10 mM citrate buffer pH 6.0 at 120°C for 5 min. The section was incubated with AA1006 (10µg/ml), followed by staining with avidin-biotin-complex method. AA1006 stains the cytoplasm of adenocarcinoma cells (arrow heads) stronger than non-tumorous epithelial cells (star). Original magnification: x240.

Kondo S et al. (1999) Free Radical Biology & Medicine 27(3/4):401–410

Catalog no.: AA1006.1 / AA1006.2

Immunogen: 4-HNE-modified Keyhole Limpet Hemocyanin

Host: Mouse

Clone no.: HNEJ-2

Isotype: $IgG_{1(kappa)}$

Matrix: Ascites, ammonium sulfate purified, 50 mM Tris-buffered saline (TBS)

Specificity: 4-hydroxy-2-nonenal (4-HNE)

This antibody shows almost negligible reactivity with proteins that were treated with other aldehydes, such as 2-nonenal, 2-hexenal, 1-hexanal, 4-hydroxy-2-hexenal, formaldehyde, or glutaraldehyde

Contents: 20 µg / 100 µg (lyophilized)

Resuspend in 200 µl / 1000 µl aqua bidest. for 100 µg/ml

Known applications: ELISA[1], Western Blot (15 µg/ml)[1], immunohistochemistry (paraffin section, 10 µg/ml; cryosections)[2, 3, 4]

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. Toyokuni S, Miyake N, Hiai H, Hagiwara M, Kawakishi S, Osawa T, Uchida K (1995). The monclonal antibody specific for the 4-hydroxy-2-nonenal histidine adduct. *FEBS Lett.* **359**, p189-191.

2. Tanaka T, Nishiyama Y, Okada K, Hirota K, Matsui M, Yodoi J, Hiai H, Toyokuni S (1997). Induction and nuclear translocation of thioredoxin by oxidative damage in the mouse kidney: independence of tubular necrosis and sulfhydryl depletion. *Lab. Invest.* **77**(2), p145-155.

3. Kondo S, Toyokuni S, Iwasa Y, Tanaka T, Onodera H, Hiai H, Imamura M (1999). Persistent oxidative stress in human colorectal carcinoma, but not in adenoma. *Free Radic Biol Med* **27**(3-4): 401-410.

4. 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.

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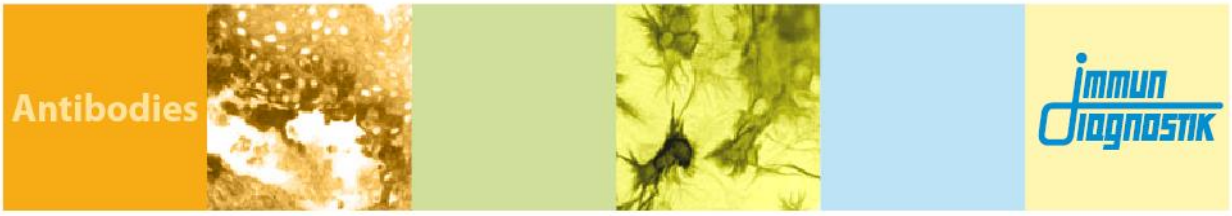

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For research use only

Publishing research using AA1006? Please let us know so that we can cite your publication as a reference.

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