

# Product Datasheet

## Acrolein Antibody NB200-556

Unit Size: 0.025 mg

Store at 4C short term. Aliquot and store at -20C long term. Avoid freeze-thaw cycles.

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**NB200-556****Acrolein Antibody**

<b>Product Information</b>	
<b>Unit Size</b>	0.025 mg
<b>Concentration</b>	LYOPH mg/ml
<b>Storage</b>	Store at 4C short term. Aliquot and store at -20C long term. Avoid freeze-thaw cycles.
<b>Clonality</b>	Polyclonal
<b>Preservative</b>	No Preservative
<b>Reconstitution Instructions</b>	Reconstitute with 0.1 ml sterilized deionized water.
<b>Isotype</b>	IgG
<b>Purity</b>	Immunogen affinity purified
<b>Buffer</b>	PBS (pH 7.2)
<b>Product Description</b>	
<b>Host</b>	Rabbit
<b>Species</b>	Non-species specific
<b>Reactivity Notes</b>	Recognizes conjugated Acrolein.
<b>Specificity/Sensitivity</b>	Recognizes conjugated Acrolein. Using a conjugate Acrolein Protein, specificity was performed with an ELISA test by competition experiments with the following compounds. Acrolein-BSA (ratio 1:1), Malondialdehyde-BSA (1:55), Glyoxal-BSA (1:>50,000), Formaldehyde-BSA (1:>50,000), Glutaraldehyde-BSA (1:> 50,000)
<b>Immunogen</b>	Synthetic acrolein conjugated to protein carrier (PC).
<b>Product Application Details</b>	
<b>Applications</b>	Western Blot, Dot Blot, ELISA, Immunocytochemistry/Immunofluorescence, Immunohistochemistry, Immunohistochemistry-Paraffin
<b>Recommended Dilutions</b>	Western Blot 1:1000-1:2000, ELISA 1:5000-1:10000, Immunohistochemistry 1:10-1:500, Immunocytochemistry/Immunofluorescence, Immunohistochemistry-Paraffin 1:500-1:1000, Dot Blot
<b>Application Notes</b>	Antiserum previously preabsorbed on protein carriers, and purified by ammonium sulfate precipitation and gel filtration. Use in Immunocytochemistry/immunofluorescence reported in scientific literature (PMID 25505195). Use in Dot Blot reported in scientific literature ( PMID 25446876)



## Publications

Phan K, He Y, Pickford R et al. Uncovering pathophysiological changes in frontotemporal dementia using serum lipids Sci Rep 2020-02-27 [PMID: 32107421] (WB, Human)

Baba SP, Zhang D, Singh M et al. Deficiency of aldose reductase exacerbates early pressure overload-induced cardiac dysfunction and autophagy in mice. J. Mol. Cell. Cardiol. 2018-04-05 [PMID: 29627295] (Mouse)

Hall SE, Aitken RJ, Nixon B et al. Electrophilic aldehyde products of lipid peroxidation selectively adduct to heat shock protein 90 and arylsulfatase A in stallion spermatozoa. Biology of Reproduction. 2017-01-17 [PMID: 28395341]

Marquis A, Packer RA, Borgens RB, Duerstock BS. Increase in oxidative stress biomarkers in dogs with ascending-descending myelomalacia following spinal cord injury J. Neurol. Sci. 2015-04-14 [PMID: 25912174] (WB, Canine)

Lord T, Martin JH, Aitken RJ. Accumulation of Electrophilic Aldehydes During Post-Ovulatory Ageing of Mouse Oocytes Causes Reduced Fertility, Oxidative Stress, and Apoptosis. Biol. Reprod. 2014-12-10 [PMID: 25505195] (ICC/IF, WB, Mouse)

Tully M, Zheng L, Acosta G et al. Acute systemic accumulation of acrolein in mice by inhalation at a concentration similar to that in cigarette smoke. Neurosci Bull. 2014-12-01 [PMID: 25446876] (Cytometric Bead Assay Standard, Mouse)

### Details:

Acrolein antibody used in Dot Blot application for detecting the accumulation of acrolein-lysine adducts in the spinal cords of mice following nasal exposure to acrolein. Fig 3 shows the representative dot blots for control, acrolein, and sham groups.

Mizukami S, Ichimura R, Kemmochi S et al. Induction of GST-P-positive proliferative lesions facilitating lipid peroxidation with possible involvement of transferrin receptor up-regulation and ceruloplasmin down-regulation from the early stage of liver tumor promotion in rats. Arch Toxicol 2010-04-01 [PMID: 20091025] (IHC-P)

Leung G, Sun W, Zheng L et al. Anti-acrolein treatment improves behavioral outcome and alleviates myelin damage in experimental autoimmune encephalomyelitis mouse Neuroscience 2011-01-01 [PMID: 21081153] (WB)

Kitaguchi Y, Taraseviciene-Stewart L, Hanaoka M, Natarajan R, Kraskauskas D et al. Acrolein Induces Endoplasmic Reticulum Stress and Causes Airspace Enlargement. PLoS ONE 7(5): e38038. 2012-01-01 [PMID: 22675432] (IF/IHC, Human)

Bruban J, Maoui A, Chalour N et al. CCR2/CCL2-mediated inflammation protects photoreceptor cells from amyloid-beta-induced apoptosis. Neurobiol Dis;42(1):55-72. 2011-04-01 [PMID: 21220018]

Hammnan et al. CRITICAL ROLE OF ACROLEIN IN SECONDARY INJURY FOLLOWING EX VIVO SPINAL CORD TRAUMA. J Neurochem; 107(3): 712-721. 2008-11-01 [PMID: 18710419] (WB, IF/IHC)





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### **Limitations**

This product is for research use only and is not approved for use in humans or in clinical diagnosis. Primary Antibodies are guaranteed for 1 year from date of receipt.

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