NEUROMICS

Malondialdehyde (MDA) Data Sheet

Catalog Number:	GT19003	**Host:**	Goat
Product Type:	Whole Serum Antibody	**Species Reactivity:**	Human
Immunogen Sequence:	Malondialdehyde (MDA) conjugate. Does not react with BSA carrier.	**Format:**	Liquid. Whole Serum
Applications:	Western blot: 1:3,000.		
	Dilutions listed as a recommendation. Optimal dilution should be determined by investigator.		
Storage:	Maintain at +2-8°C for 3 months or at -20°C for longer periods. Stable for 1 year. *Avoid repeated freeze-thaw cycles.*		
References:	Hall, E.D and Andrus PK. Measurement of oxygen radicals and lipid peroxidation in neural tissues. Curr Protoc Neurosci. 2001 May;Chapter 7:Unit7.17		

Application Notes

Description/Data:
Malondialdehyde (MDA) is a natural product formed in all mammalian cells either as a product of lipid peroxidation, or as a by-product of prostaglandin and thromboxane biosynthesis. Although MDA can be broken down by aldehyde dehydrogenases, its production is accelerated by oxidative stress and when its concentrations reach critical levels, it may escape this detoxification process. It is highly reactive and known to bind covalently with primary amino groups of proteins, phospholipids, or DNA, but has no known physiological function. This covalence modification of cellular molecules may cause structural modifications, which results in dysfunction or inactivation. MDA is toxic and has been implicated in aging, mutagenesis, carcinogenesis, radiation damage and a number of other pathological processes. MDA is known to increase in tissue and plasma samples with age. It is known to bind to low density lipoprotein resulting in the recognition of the MDA-modified LDL by scavenger receptors on macrophages. It has also been shown to be present in renal glomerular lesions in diabetics, implicating oxidative stress as being involved in the pathogenesis of diabetic nephopathy. MDA has been shown to be increased in the brains of aged individuals and further increased in Alzheimer brains.

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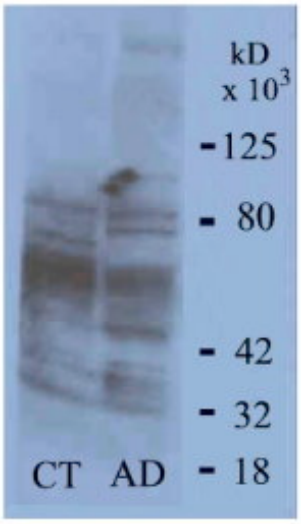
phone 866-350-1500 • fax 612-677-3976 • e-mail: pshuster@neuromics.com

Image: Western blot of aged control and Alzheimer's brain homogenates using a 1:3,000 dilution of malondialdehyde antibody.



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