



## Anti GA-pyridine

### BACKGROUND

Glycolaldehyde formed as a result of the myeloperoxidase-H<sub>2</sub>O<sub>2</sub> (MPO) reaction can react with proteins to yield various AGEs. Recently, a novel specific GA-derived AGE, called GA-pyridine, has been described in foam cells and the extracellular matrix of human atherosclerotic fibrotic lesions, glomerular mesangial and Bruch's membrane and choroid.

<b>Product type</b>	Primary antibody
<b>Immunogen</b>	GA-LDL
<b>Host Species</b>	Mouse
<b>Fusion Partner</b>	P3U1
<b>Clone Designation</b>	2A2
<b>Isotype</b>	IgG1
<b>Host</b>	Mouse
<b>Source</b>	Ascites
<b>Purification</b>	Protein G
<b>Form</b>	Liquid
<b>Formulation Buffer</b>	PBS containing 0.1% proclin and 2% sorbitol as a preservative
<b>Concentration</b>	0.2 mg / ml
<b>Volume</b>	100 ul
<b>Label</b>	Unlabeled
<b>Specificity</b>	GA-pyridine
<b>Cross species reactivity</b>	-
<b>Storage</b>	Store below -20°C (below -70°C for prolonged storage) Aliquot to avoid cycles of freeze/thaw.

<b>Application notes</b>	<ul style="list-style-type: none"><li>• <b>Western blotting:</b> 1/200 - 1/2000</li></ul>
Recommended dilutions	<ul style="list-style-type: none"><li>• <b>Immunofluorescence:</b> 1/200 - 1/400</li><li>• <b>ELISA:</b> 1/200 - 1/400</li></ul>

Other applications have not been tested.  
Optimal dilutions/concentrations should be determined by the end user.

<b>References</b>	<ol style="list-style-type: none"><li>1) Nagai R., Hayashi CM., Xia L., Takeya M., Horiuchi S: Identification in human atherosclerotic lesions of GA-pyridine, a novel structure derived from glycolaldehyde-modified proteins. J Biol Chem. 277, 48905-48912 (2002) <b>PMID:</b> <a href="#">12377783</a></li><li>2) Glenn JV., Mahaffy H., Wu K., Smith G., Nagai R., Simpson DAC., Boulton ME., Stitt AW. Advanced Glycation End Product (AGE) Accumulation on Bruch's Membrane: Links to Age-Related RPE Dysfunction. Invest. Ophthalm. Vis. Sci. 50, 441-451 (2009) <b>PMID:</b> <a href="#">18676633</a></li></ol>
-------------------	--

## ANTIBODY CHARACTERIZATION

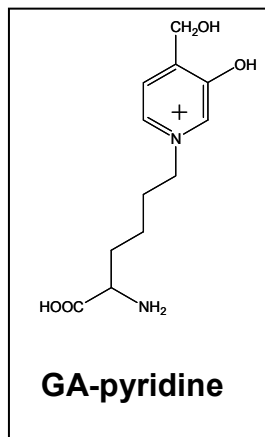


Fig.1 GA-pyridine structure

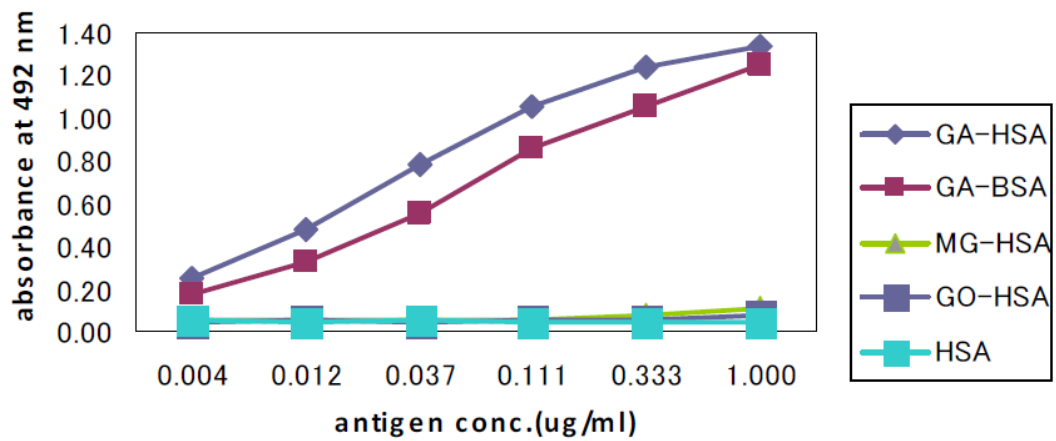


Fig.2 Immunoreactivity of the GA-pyridine (2A2) monoclonal antibody to GA-HAS, GA-BSA, MG-HAS, GO-HSA and HSA

## ELISA protocol

### Coating

- 1) Distribute 100 ul / well of the sample solution (1 ug/mL in PBS) to 96 well microtiter plates (Thermo, MaxiSorp).
- 2) Incubate the plates 2h at RT or overnight at 4 degrees.
- 3) Discard the supernatant of sample solution.
- 4) Wash the plates three times with washing.buf.(PBS/0.05%Tween 20)

### Blocking

- 1) Distribute 200 ul / well of 0.5% gelatin-PBS to 96 well microtiter plates
- 2) Incubate the plates 1h at RT.
- 3) Discard the the supernatant of 0.5% gelatin-PBS
- 4) Wash the plates three times with washing.buf.(PBS/0.05%Tween 20)

### Primary antibody

- 1) Distribute 100 ul / well of Primary antibodies diluted with washing buf. as suggested in the APPLICATIONS to each well.
- 2) Incubate the plates 1h at RT.
- 3) Discard the supernatant of Primary antibody solution.
- 4) Wash the plates three times with washing.buf.(PBS/0.05%Tween 20)

### Secondary antibody

- 1) Distribute 100 ul / well of secondary antibodies (HRP-anti mouse IgG) diluted with washing buf. as suggested in the APPLICATIONS to each well.
- 2) Incubate the plates 1h at RT.
- 3) Discard the supernatant of secondary antibody.
- 4) Wash the plates three times with washing.buf.(PBS/0.05%Tween 20)

### OPD color reaction

- 1) Reaction for 2-10 minutes at RT..
- 2) Distribute 100 uL / well of 2M H<sub>2</sub>SO<sub>4</sub> to each well and stop enzyme reaction.
- 3) After gentle mixing, determine the absorbance at 492 nm of each well by a spectrophotometer.

## RELATED PRODUCTS:

Product Name	Quantity	Maker	Cat#
Anti N <sup>ε</sup> -(carboxymethyl) lysine [CML] (2G11) Monoclonal Antibody	100 ul	CAC	AGE-M01
Anti N <sup>ε</sup> -(carboxyethyl) lysine [CEL] (CEL-SP) Monoclonal Antibody	100 ul	CAC	AGE-M02
Anti GA-pyridine (2A2) Monoclonal Antibody	100 ul	CAC	AGE-M03
Anti N <sup>ω</sup> -(carboxymethyl) arginine [CMA] (3F5) Monoclonal Antibody	100 ul	CAC	AGE-M04
CML-BSA/N <sup>ε</sup> -(carboxymethyl) lysine-BSA	200 ul	CSR	AGE-GP01
CEL-BSA/N <sup>ε</sup> -(carboxyethyl) lysine-BSA	200 ul	CSR	AGE-GP02
GA-BSA/Glycolaldehyde-BSA	200 ul	CSR	AGE-GP03
Ribose-gelatin	500 ul	CSR	AGE-GP04
Mild-AGE-BSA	200 ul	CSR	AGE-GP05

*For research use only, Not for diagnostic use.*



**COSMO BIO Co., LTD.**

【JAPAN】  
TOYO EKIMAE BLDG. 2-20, TOYO 2-CHOME,  
KOTO-KU. TOKYO 135-0016, JAPAN  
Phone: +81-3-5632-9610  
FAX: +81-3-5632-9619  
URL: <https://www.cosmobio.co.jp/>



**COSMO BIO USA**

【Outside Japan】  
2792 Loker Ave West, Suite 101  
Carlsbad, CA 92010, USA  
email: [info@cosmobiousa.com](mailto:info@cosmobiousa.com)  
Phone/FAX: (+1) 760-431-4600  
URL: [www.cosmobiousa.com](http://www.cosmobiousa.com)