



## Anti N<sup>ω</sup> - (carboxymethyl) arginine (CMA)

### BACKGROUND

N<sup>ω</sup>-(carboxymethyl) arginine (CMA), a CML analogue, is an acid-labile AGE structure which was discovered in enzymatic hydrolysate of glycated collagen. CMA is preferentially generated in glycated collagen.

Product type	Primary antibody
Immunogen	CMA-HSA
Host Species	Mouse
Fusion Partner	P3U1
Clone Designation	3F5
Isotype	IgG1
Host	Mouse
Source	Ascites
Purification	Protein G
Form	Liquid
Formulation Buffer	PBS containing 0.1% proclin as a preservative
Concentration	0.1 mg / ml
Volume	100 ul
Label	Unlabeled
Specificity	CMA
Cross species reactivity	-
Storage	Store below -20°C (below -70°C for prolonged storage) Aliquot to avoid cycles of freeze/thaw.

Application notes	• <b>Western blotting:</b> 1/100 - 1/1000
Recommended dilutions	• <b>Immunohistochemistry:</b> 1/50 - 1/100 (frozen section)
	• <b>ELISA:</b> 1/100 - 1/200

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

References	1) Iijima K, Murata M, Takahara H, Irie S, Fujimoto D. Identification of N(omega)-carboxymethylarginine as a novel acid-labile advanced glycation end product in collagen. Biochem J. 347 Pt 1:23-27 (2000) PMID: <a href="#">10727397</a>
	2) Mera K., Fujiwara Y., Otagiri M., Sakata N., Nagai R. Immunological Detection of N <sup>ε</sup> -carboxymethylarginine by Specific Antibody. Ann N Y Acad Sci. 1126, 155-157 (2008) PMID: <a href="#">18079475</a>

## ANTIBODY CHARACTERIZATION

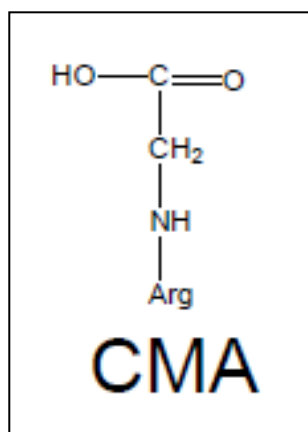


Fig.1 N<sup>o</sup>- (carboxymethyl) arginine (CMA) structure

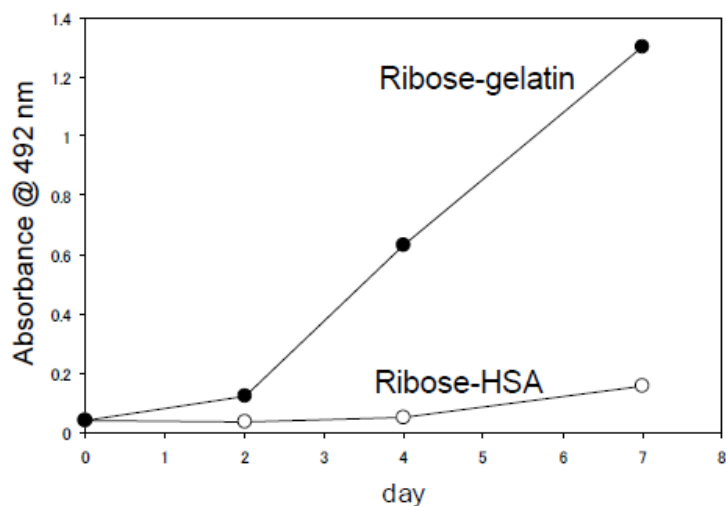


Fig.2 Immunoreactivity of the CMA(3F5) monoclonal antibody to Ribose-gelatin and Ribose-HSA

## 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>F</sup> -(carboxymethyl) lysine [CML] (2G11) Monoclonal Antibody	100 ul	CAC	AGE-M01
Anti N <sup>F</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/Nε-(carboxymethyl) lysine-BSA	200 ul	CSR	AGE-GP01
CEL-BSA/Nε-(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

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Inspiration for Life Science

TOYO 2CHOME, KOTO-KU, TOKYO, 135-0016, JAPAN

URL: <http://www.cosmobio.co.jp>

e-mail: [export@cosmobio.co.jp](mailto:export@cosmobio.co.jp)

[Outside Japan] Phone : +81-3-5632-9617

[国内連絡先] Phone : +81-3-5632-9610

FAX : +81-3-5632-9618

FAX : +81-3-5632-9619