



Anti N^ε-(carboxyethyl) lysine (CEL)

BACKGROUND

N^ε-(carboxyethyl) lysine (CEL) is generated from protein modification by methylglyoxal (MG), which is enzymatically derived from the Embden-Meyerhof and polyol pathways, through the degradation of glyceraldehyde-3-phosphate (G3P) (Phillips and Thornalley, 1993). McLellan et al. (McLellan et al., 1994) demonstrated that plasma MG concentrations in insulin-dependent diabetic patients were 7-times higher than those of healthy individuals

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

Application notes	• Western blotting: 1/200 - 1/400
Recommended dilutions	• Immunofluorescence: 1/100 - 1/200
	• ELISA: 1/200 - 1/400

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

References	1) Nagai R., Fujiwara Y., Mera K., Yamagata K., Sakashita N., Takeya M. Immunochemical detection of N ^ε -(carboxyethyl)lysine using a specific antibody. J. Immunol. Methods 332, 112-120 (2008) PMID: 18242632
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ANTIBODY CHARACTERIZATION

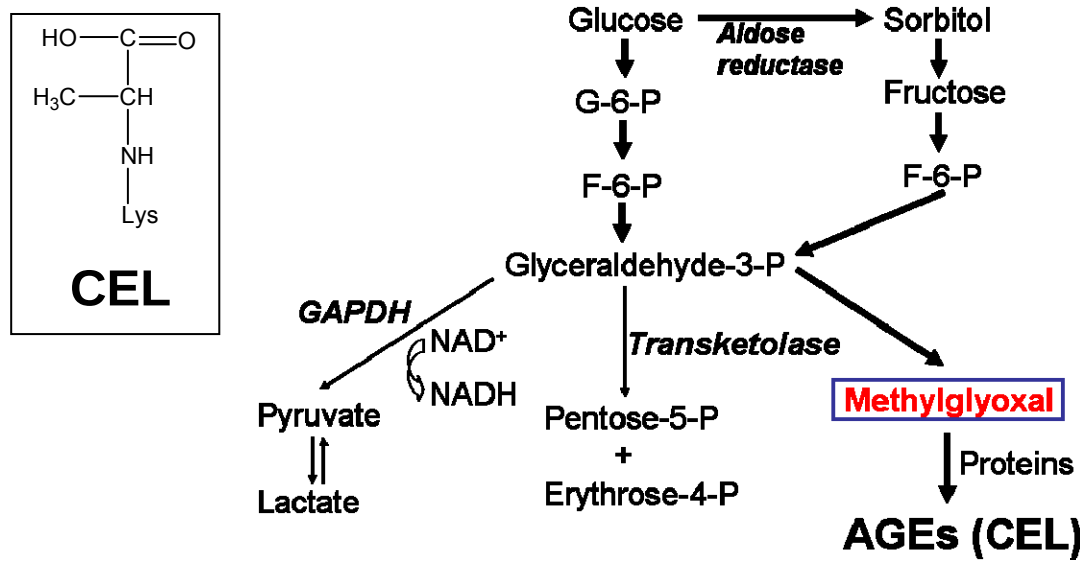


Fig.1 CEL production pathway

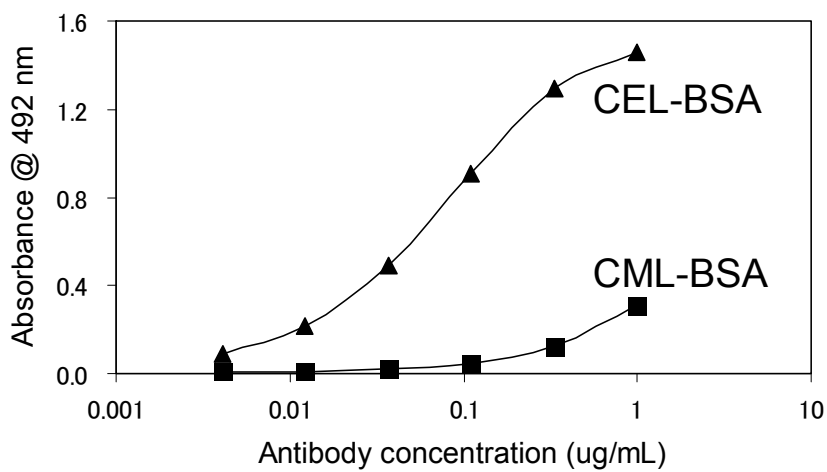


Fig.2 Immunoreactivity of the CEL-SP monoclonal antibody to CEL-BSA and CML-BSA

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 H₂SO₄ 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 ^F -(carboxymethyl) lysine [CML] (2G11) Monoclonal Antibody	100 ul	CAC	AGE-M01
Anti N ^F -(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 ^ω -(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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