COSMO BIO CO., LTD.
Inspiration for Life Science

MONOCLONAL ANTIBODY

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Catalog No. AGE-M02

Anti N$^{\varepsilon}$-(carboxyethyl) lysine (CEL)

BACKGROUND

N$^{\varepsilon}$-(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℃ (below -70°C for prolonged storage) Aliquot to avoid cycles of freeze/thaw.

Application notes

Recommended dilutions

- **Western blotting:** 1/200 - 1/400
- **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 Nε-(carboxyethyl)lysine using a specific antibody. J. Immunol. Methods 332, 112-120 (2008) **PMID**: 18242632

ANTIBODY CHARACTERIZATION

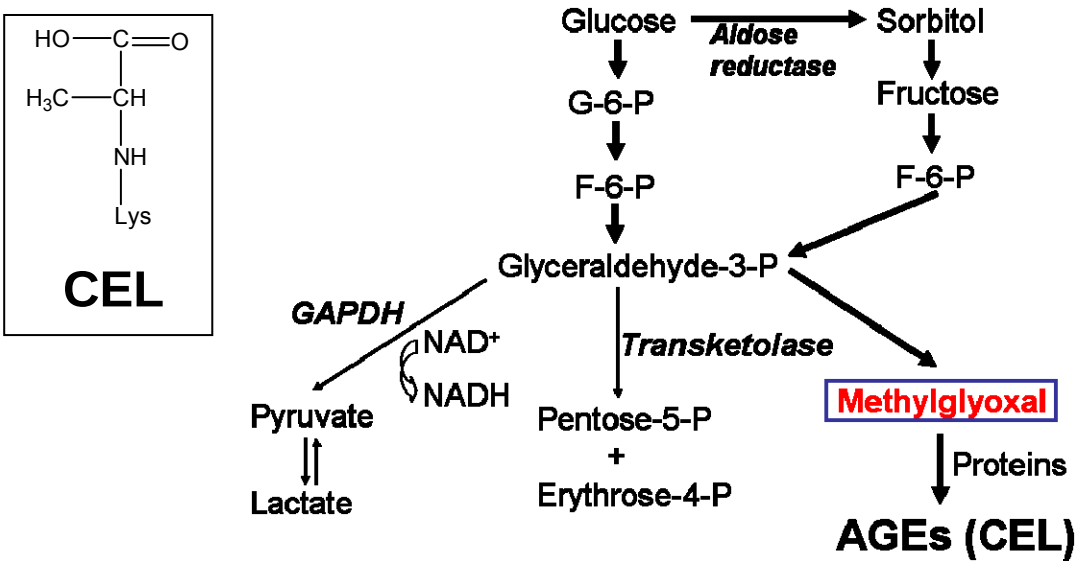

Fig.1 CEL production pathway

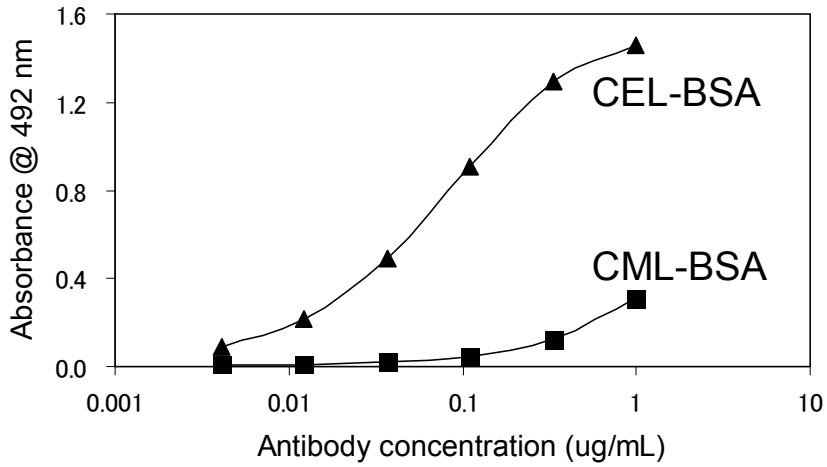

Fig.2 Immunoreactivity of the CEL-SP monoclonal antibody to CEL-BSA and CML-BSA

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 H_2SO_4 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^{ε}-(carboxymethyl) lysine [CML] (2G11) Monoclonal Antibody	100 ul	CAC	AGE-M01
Anti N^{ε}-(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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