

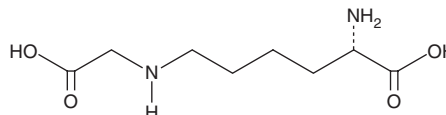
# PRODUCT INFORMATION



## N<sup>ε</sup>-(1-Carboxymethyl)-L-lysine

Item No. 16483

CAS Registry No.: 5746-04-3  
Formal Name: N<sup>ε</sup>-(carboxymethyl)-L-lysine  
Synonym: CML  
MF: C<sub>8</sub>H<sub>16</sub>N<sub>2</sub>O<sub>4</sub>  
FW: 204.2  
Purity: ≥95%  
Supplied as: A crystalline solid  
Storage: -20°C  
Stability: ≥4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

### Laboratory Procedures

N<sup>ε</sup>-(1-Carboxymethyl)-L-lysine is supplied as a crystalline solid. Aqueous solutions of N<sup>ε</sup>-(1-Carboxymethyl)-L-lysine can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of N<sup>ε</sup>-(1-Carboxymethyl)-L-lysine in PBS, pH 7.2, is approximately 10 mg/ml. We do not recommend storing the aqueous solution for more than one day.

### Description

N<sup>ε</sup>-(1-Carboxymethyl)-L-lysine (CML) is an advanced glycation end product (AGE), produced by the oxidative modification of glycated proteins during oxidative stress.<sup>1-3</sup> Levels of CML increase with aging and during diabetes, cancer, vascular disease, and other pathologies marked by oxidative stress.<sup>1,4,5</sup> CML activates the membrane-bound receptor for AGEs (RAGE), triggering signaling through MAPKs and NF-κB, whereas truncation of RAGE produces a soluble protein that binds CML and reduces signaling.<sup>6,7</sup>

### References

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5. Brouwers, O., de Vos-Houben, J.M.J., Niessen, P.M.G., *et al.* Mild oxidative damage in the diabetic rat heart is attenuated by glyoxalase-1 overexpression. *Int. J. Mol. Sci.* **14(8)**, 15724-15739 (2013).
6. Schmidt, A.M., Yan, S.D., Yan, S.F., *et al.* The biology of the receptor for advanced glycation end products and its ligands. *Biochim. Biophys. Acta* **1498(2-3)**, 99-111 (2000).
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#### WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

#### SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

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