

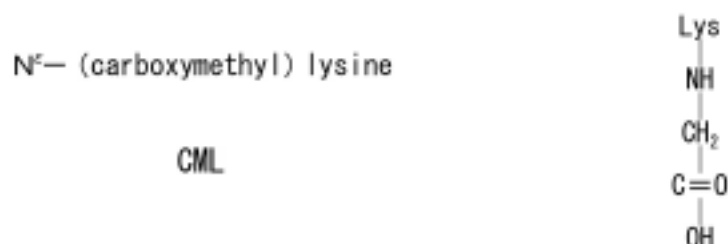
**Advanced Glycation End Products (AGEs)**  
**Anti CML Monoclonal Antibody (Clone No. CMS-10)**  
**Peroxidase conjugated**

Reaction of protein amino groups with glucose leads, through the early products such as a Schiff base and Amadori rearrangement products, to the formation of advanced glycation end products (AGEs). Recent immunological studies using anti-AGEs antibody (6D12) demonstrated the presence of AGEs-modified proteins in several human tissues: ( i ) human lens (nondiabetic and noncataractous), ( ii ) renal proximal tubules in patients with diabetic nephropathy and chronic renal failure, ( iii ) diabetic retina, ( iv ) peripheral nerves of diabetic neuropathy, ( v ) atherosclerotic lesions of arterial walls, ( vi )  $\beta_2$ -microglobulin forming amyloid fibrils in patients with hemodialysis-related amyloidosis, ( vii ) senile plaques of patients with Alzheimer's disease, ( viii ) the peritoneum of CAPD patients, ( ix ) skin elastin in actinic elastosis, and ( x ) ceroid/lipofuscin deposits. These results suggest a potential role of AGEs-modification in normal aging as well as age-enhanced disease processes. This antibody named as 6D12 has been used to demonstrate AGEs-modified proteins in these human tissues, indicating potential usefulness of this antibody for histochemical identification and biochemical quantification of AGEs-modified proteins.

$N^{\epsilon}$ -(carboxymethyl)lysine (CML) was a major AGEs structure identified by Banes et al. in 1989. Oxidative cleavage of Amadori products is considered as a major route to CML formation in vivo. Banes also revealed that CML was directly formed from the reaction between lipidoxidative products and Lysine residue. Thus, CML could become a marker of oxidative stress and long term damage to protein in aging, atherosclerosis, and diabetes.

Package Size	50 $\mu$ g (200 $\mu$ L/vial)
Format	Mouse monoclonal antibody, Peroxidase conjugated 0.25 mg/mL
Buffer	Block Ace as a stabilizer, containing 0.1% Proclin as a bacteriostat
Storage	Store below $-20^{\circ}\text{C}$ . Once thawed, store at $4^{\circ}\text{C}$ . Repeated freeze-thaw cycles should be avoided.
Clone No.	CMS-10
Subclass	IgG1
Purification method	The splenic lymphocytes from BALB/c mouse, immunized with CML-KLH were fused to myeloma P3U1 cells. The cell line (CMS-10) with positive reaction was grown in ascitic fluid of BALB/c mouse, from which the antibody was purified by Protein G affinity chromatography and conjugated.

Working dilution for immunohistochemistry: 5-10  $\mu$ g/mL; for ELISA: 0.1-1.0  $\mu$ g/mL



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**【References】**

1. Dunn JA, Patrick JS, Thorpe SR, Baynes JW (1989): Oxidation of glycated proteins: Age-dependent accumulation of N<sup>ε</sup>-(carboxymethyl) lysine in lens proteins. *Biochemistry*. 28: 9464-9468.
2. Fu MX, Requena JR, Jenkins AJ, Lions TJ, Baynes JW, Thorpe SR(1996): The advanced glycation end product, N<sup>ε</sup>-(carboxymethyl) lysine, is a product of both lipid peroxidation and glycoxidation reactions. *J.Biol.Chem.*271: 9982-9986

\* These references are the background of CML, and are not this antibody examples.

Manufacturer



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