



Advanced Glycation End Products (AGEs)  
**Anti CEL Monoclonal Antibody (Clone No. KNH-30)**

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.

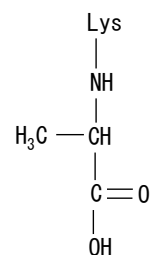
CEL is known to generate from protein modification by methylglyoxal . Mclellan et al. demonstrated that plasma methylglyoxal, which is believed to be generate from Embden-Meyerhof and polyol pathways, concentrations in insulin-dependent diabetic patients were about 7-times higher than those of normal individuals. For examples, CEL was identified in human lens proteins at a concentration similar to that of CML and its accumulation increased with age like CML, indicating that CEL may play an important marker for aging and age-dependent disease such as diabetic complications.

Package Size	50 $\mu$ g (200 $\mu$ L/vial)
Format	Mouse monoclonal antibody 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.	KNH-30
Subclass	IgG1
Purification method	The splenic lymphocytes from BALB/c mouse, immunized with CEL-BSA were fused to myeloma P3U1 cells. The cell line (KNH-30) with positive reaction was grown in ascitic fluid of BALB/c mouse, from which the antibody was purified by Protein G affinity chromatography.

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

**N<sup>ε</sup>— (carboxyethyl) lysine**

**CEL**





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【References】

1. Ahmed MU, Brinkmann E, Degenhardt TP, Thorpe SR, Baynes JW: N<sup>ε</sup>-(Carboxyethyl)lysine, a product of the chemical modification of proteins by methylglyoxal, increases with age in human lens proteins. *Biochem J* 324:565-570, 1997
2. Degenhardt TP, Thorpe SR, Baynes JW: Chemical modification of proteins by methylglyoxal. *Cell Mol Biol* 44:1139-1145, 1998
3. Mclellan AC, Thornalley PJ, Benn J, Sonksen PH: Glyoxalase system in clinical diabetes mellitus and correlation with diabetic complications. *Clinical Science* 87: 21-29, 1994

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

**Manufacturer**



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