Trans Genic Inc.

Code No.KH025-02

For research use only

Advanced Glycation End Products （AGEs）

Anti CEL Monoclonal Antibody (Clone No. KNH-30) 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) β_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) ceriod/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.

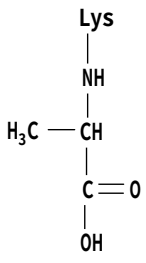
CEL is known to generate from protein modification by methylglyoxal . Mclellan et al. demonstrated that plasma methylglyoxal, which is believed to be generate from Embden-Meyerhof and polyol pathways, concentrations in insulin-dependent diabetic patients were about 7-times higher than those of normal 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 μg (200 μL/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℃.
	Once thawed, store at 4℃. 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 and conjugated.

Working dilution for immunohistochemistry: 5-10 μg/mL; for ELISA: 0.1-1.0 μg/mL

N^{ε}— (carboxyethyl) lysine

CEL



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【References】

1. Ahmed MU, Brinkmann E, Degenhardt TP, Thorpe SR, Baynes JW: N^{ε}-(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

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