Code No. KAL-KH002-EX

For research use only

Advanced Glycation End Products （AGE）

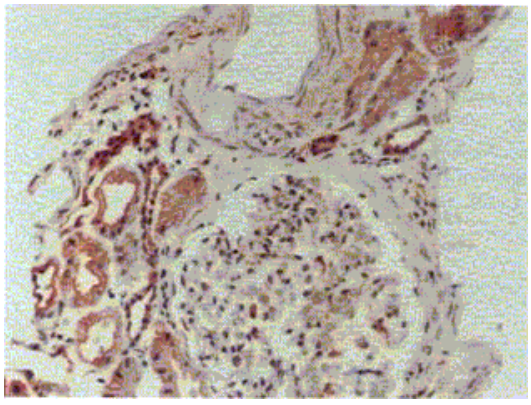
Anti AGE Monoclonal Antibody, Fab', Peroxidase conjugated

（Clone No. 6D12）

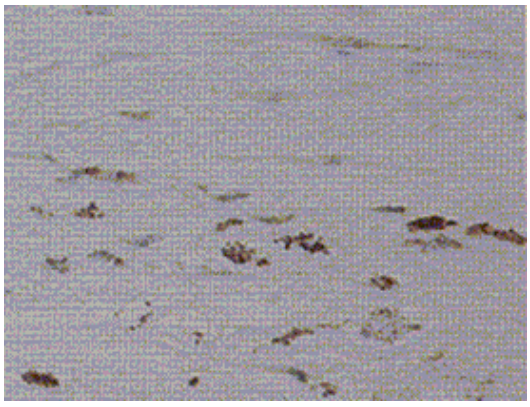
Reaction of protein amino groups with glucose leads, through the early products such as a Schiff base and Amadori rearrangement products, to the formation of advanced glycation end products (AGE). Recent immunological studies using anti-AGE antibody (6D12) demonstrated the presence of AGE-modified proteins 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 AGE-modification in normal aging as well as age-enhanced disease processes. This antibody named as 6D12 has been used to demonstrate AGE-modified proteins in these human tissues, indicating potential usefulness of this antibody for histochemical identification and biochemical quantification of AGE-modified proteins.

Package Size	20 μg (200 μL/vial)
Format	Mouse monoclonal antibody 0.25 mg/mL
Buffer	Block Ace as a stabilizer, containing 0.1%Proclin as bacteriostat
Storage	Store below –20℃. Once thawed, store at –4℃. Repeated freeze-thaw cycles should be avoided.
Clone No.	6D12
Subclass	IgG1
Purification method	The splenic lymphocytes from BALB/c mouse, immunized with AGE-BSA were fused to myeloma P3U1 cells. The hybrid cells were screened, and the cell line (6D12) with positive reaction to AGE-human serum albumin but negative to BSA was selected through successive subclonings and grown in ascitic fluid of BALB/c mouse, from which the anti-AGE antibody was purified by Protein G affinity chromatography. (Reference No.1)

Working dilution for immunohistochemistry: 2 μg/mL; for ELISA: 0.1-0.5 μg/mL



Immunohistochemical staining of renal proximal tubules and glomeruli in patients with diabetic nephropathy, using anti-AGE antibody 6D12.
Yamada, K. et al,
Clinical nephrology, Vol.42, 354-361, 1994



Immunohistochemical staining of th eary stage of human athrosclerotic lesions of the aorta with anti-AGE antibody 6D12.
Kume, S. et al,
American Journal of Pathology, Vol.147, 654-667, 1995

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(Clone No. 6D12)

【Specificity】

The initial study (Ref. 1) revealed that 6D12 does not recognize early products (Schiff base and Amadori products), but shows a positive reaction to AGE-samples obtained either from proteins, lysine derivatives or monoamino-carboxylic acids, indicating the immunospecificity to a common structure among AGE-structures. The subsequent study (Ref. 10) revealed of 6D12 is an N^{ε} - carboxymethyllysine(CML)-protein adduct.

【References】

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