Trans Genic Inc.

Code No.KH001-01

For research use only

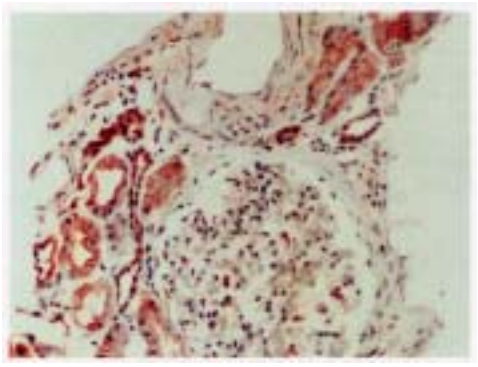
Advanced Glycation End Products （AGEs）

Anti AGEs Monoclonal Antibody（Clone No. 6D12） Biotin 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) β2-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.

Package Size	10µg (40µL/vial)
Format	Mouse monoclonal antibody, Biotin conjugated 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 AGEs-BSA were fused to myeloma P3U1 cells. The hybrid cells were screened, and the cell line (6D12) with positive reaction to AGEs-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-AGEs antibody was purified by Protein G affinity chromatography (Reference No.1) and conjugated.

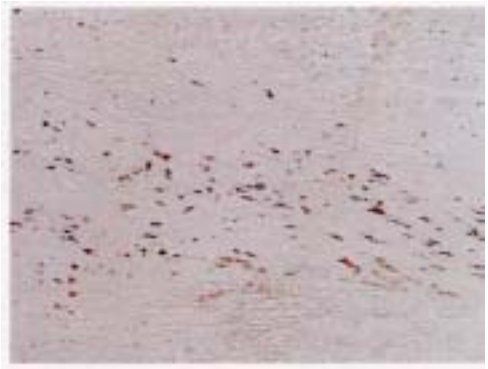
Working dilution for immunohistochemistry: 2µg /mL; for ELISA: 0.1-0.5µg /mL; for WB : 0.25-5µg /mL



Immunohistochemical staining of renal proximal tubules and glomeruli in patients with diabetic nephropathy, using anti-AGEs 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-AGEs antibody 6D12.

Kume, S. et al,

American Journal of Pathology, Vol.147, 654-667, 1995

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Advanced Glycation End Products （AGEs）

Anti AGEs Monoclonal Antibody（Clone No. 6D12）Biotin conjugated

【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 AGEs-samples obtained either from proteins, lysine derivatives or monoamino-carboxylic acids, indicating the immunospecificity to a common structure among AGEs-structures. The subsequent study (Ref. 10) revealed of 6D12 is an N^{ε}- carboxymethyllysine(CML)-protein adduct.

【Reference】

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