



Code No.KAL-KH012-01-EX

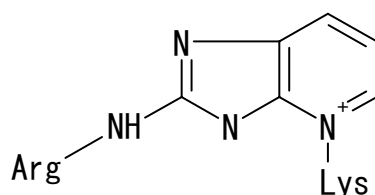
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**Advanced Glycation End Products (AGE)**  
**Anti Pentosidine Monoclonal Antibody (Clone No. PEN-12)**  
**Biotin conjugated**

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 (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 )  $\beta$  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 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.

Pentosidine is one of the Maillard compounds identified by Monnier et al in 1989. It has been proved to cross-link Arginine to Lysine residue and be detected in  $\beta$  2-microglobulin from patients with hemodialysis- related amyloidosis.

Package Size	50 $\mu$ g (200 $\mu$ L/ vial)
Format	Mouse monoclonal antibody, Biotin 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.	PEN-12
Subclass	IgG1
Purification method	The splenic lymphocytes from BALB/c mouse, immunized with pentosidine-HSA were fused to myeloma P3U1 cells. The cell line (PEN-12) 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
Specificity	Reaction to pentosidine-HSA was suppressed by free-pentosidine in competitive ELISA.



Pentosidine



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**【References】**

1.	Sell, D.R., et al.(1989) : Structure Elucidation of a Senescence Cross-link from Human Extracellular Matrix. J.Biol.Chem.264 : 21597-21602
2.	Miyata T, et al.(1996) : Identification of pentosidine as a native structure for advanced glycation end products in $\beta$ 2-microglobulin-containing amyloid fibrils in patients with dialysis-related amyloidosis. Proc.Natl.Acad.Sci.USA 93 : 2353-2358

- \* These references are the background of Pentosidine , and are not this antibody examples .
- \* This product was developed in conjunction with Meiji Milk Product Co.,LTD Institute of Health Science
- \* This antibody is sold only in Japan.

**Distributor**



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Inspiration for Life Science

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