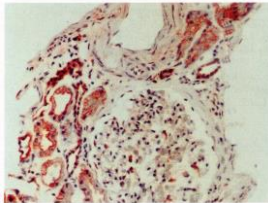


KH001-02 Anti AGEs Monoclonal Antibody (Clone No. 6D12), Peroxidase conjugated		Application	
Primary Source	-	WB	0.25-5.0 µg/mL
Type	Monoclonal	IHC	2.0 µg/mL
Immunogen	AGEs-BSA	ICC	Not tested
Raised in	Mouse	ELISA	0.1-0.5 µg/mL
Myeloma	P3U1	FCM	Not tested
Clone number	6D12	Neutralization	Not tested
Isotype	IgG1	IP	Not tested
Source	Ascites		
Purification notes	ProteinG		
Cross Reactivity	every animal species		
Concentration	0.1 mg/mL		
Contents (Volume)	20 µg (200 µL/vial)		
Label	peroxidase conjugated		
Buffer	PBS [containing 2 % Block Ace as a stabilizer, 0.1 % Proclin as a bacteriostat]		
Storage	Store below -20 °C. Once thawed, store at 4 °C. Repeated freeze-thaw cycles should be avoided.		



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 the early stage of human atherosclerotic lesions of the aorta with anti-AGEs antibody 6D12.  
Kume, S. et al.  
*American Journal of Pathology*, Vol.147, 654-667, 1995

Note

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.

AGEs(Advanced Glycation End Products)は、タンパク質の非酵素的糖付加反応(メイラード反応)により、シッフ塩基、アマドリ転移生成物(前期生成物)を経由し、脱水、酸化、縮合などの複雑な反応を受けて形成される最終生成物です。AGEsは、蛍光・褐色・分子架橋形成などの特徴の他、AGEs受容体により認識されるという生化学的特性を有しています。

近年の抗AGEs抗体による解析の結果、(1)ヒト水晶体(加齢に伴う増加)、(2)糖尿病性腎症や慢性腎不全患者の腎近位尿細管、(3)糖尿病患者の網膜、(4)糖尿病性神経障害患者の末梢神経、(5)粥状動脈硬化病変部、(6)透析性アミロイドーシスの $\beta$ 2-マイクログロブリン、(7)アルツハイマー病患者の老人斑、(8)CAPD患者の腹膜、(9)弾力線維症の皮膚のエラスチン、(10)セロイド/リポフスチン沈着部位などにAGEsが蓄積することが分かってきました。これらの知見は、老化自体や老化に伴う慢性疾患にAGEsが深く関与していることを示唆しています。

本抗体(6D12)は、加齢に伴う慢性疾患の研究に非常に有用であると思われます。

Reference

1	Horiuchi S. et al.: Immunochemical approach to characterize advanced glycation end products of the Maillard reaction; Evidence for the presence of a common structure.	J. Biol. Chem. 1991 Apr 25;266(12):7329-32.
2	Araki N. et al.: Immunochemical evidence for the presence of advanced glycation end products in human lens proteins and its positive correlation with aging.	J. Biol. Chem. 1992 May 25;267(15):10211-4.
3	Ikeda K. et al.: N $\epsilon$ -(carboxymethyl) lysine protein adduct is a major immunological epitope in proteins modified with advanced glycation end products of the Maillard reaction.	Biochemistry. 1996 Jun 18;35(24):8075-83.
4	Hammes H-P et al.: Modification of vitronectin by advanced glycation alters functional properties in vitro and in the diabetic retina.	Lab Invest. 1996 Sep;75(3):325-38.
5	Hernebring M. et al.: Elimination of damaged proteins during differentiation of embryonic stem cells.	Proc Natl Acad Sci U S A. 2006 May 16;103(20):7700-5. Epub 2006 May 3.
6	Chang KC. et al.: Aminoguanidine prevents arterial stiffening and cardiac hypertrophy in streptozotocin-induced diabetes in rats.	Br J Pharmacol. 2006 Apr;147(8):944-50.

WARNING AND PRECAUTION

- Not for diagnostic use. The safety and efficacy of product in diagnostic or other clinical uses has not been established.
- Harmful by inhalation, in contact with skin and if swallowed. Do not breathe dust. Avoid contact with skin and eyes.
- If contact with skin and eyes, wash all affected areas with large volume of water. If inhaled remove to fresh air. In severe case obtain medical attention.
- Wash hand thoroughly after handling the product.
- Do not use this product if container is broken or some contaminants are detected.
- When preserving the product, Close the container, ensure it does not fall aside or down.
- Dispose of the container and expired reagents in accordance with federal, state and local government regulations.
- Do not use the container and accessories of the product for other purpose.

取り扱い上の注意

この添付文書をよく読んでから使用して下さい。

- 本品は研究用試薬であり、医薬品その他の目的にはご使用になれません。
- 取り扱い中は皮膚、粘膜、着衣に触れたり、目に入らないように適切な措置を行って下さい。
- 試薬が誤って目や口に入った場合には、水で十分に洗い流すなどの応急処置を行い、必要があれば医師の手当を受けて下さい。
- 取り扱い後は手洗いを十分に行ってください。
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- 使用後の容器は、廃棄物に関する規定に従って処理して下さい。
- 容器、付属品等の他目的への転用は保証できません。