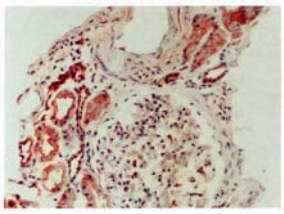
COSMO BIO CO., LTD.
Inspiration for Life Science

TransGenic Inc.

KH001-02	Anti AGEs Monoclonal Antibody (Clone No. 6D12), Peroxidase conjugated		
Primary Source	-	Application	
Type	Monoclonal	WB	0.25-5.0 µg/mL
Immunogen	AGEs-BSA	IHC	2.0 µg/mL
Raised in	Mouse	ICC	Not tested
Myeloma	P3U1	ELISA	0.1-0.5 µg/mL
Clone number	6D12	FCM	Not tested
Isotype	IgG1	Neutralization	Not tested
Source	Ascites	IP	Not tested
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 ℃. Once thawed, store at 4 ℃. 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, 354361, 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

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)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.

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β2-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 positi\ correlation with aging	J. Biol. Chem. 1992 May 25;267(15):10211-4.
3 Ikeda K. et al.:	Nε-(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

1. Not for diagnostic use. The safety and efficacy of product in diagnostic or other clinical uses has not been established.
2. Harmful by inhalation, in contact with skin and if swallowed. Do not breathe dust. Avoid contact with skin and eyes.
3. 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.
4. Wash hand thoroughly after handling the product.
5. Do not use this product if container is broken or some contaminants are detected.
6. When preserving the product, Close the container, ensure it does not fall aside or down.
7. Dispose of the container and expired reagents in accordance with federal, state and local government regulations.
8. 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。

1. 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。
2. 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。
3. 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。
4. 取り扱い後には手洗いを十分に行って下さい。
5. 容器の破損、異物混入等異常が認められた物は使用しないで下さい。
6. 試薬を保管する場合は、蓋をし、転倒落下防止を確実にし、指定の貯蔵方法で保管して下さい。
7. 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。
8. 容器、付属品等の他目的への転用は保証できません。

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