



Advanced Glycation End-Products
AGEs-BSA

The products of the nonenzymatic glycation and oxidation of proteins, lipids and nucleic acids, the advanced glycation end-products (AGEs), accumulate in various pathological conditions, such as diabetes, inflammation, renal failure, and aging. AGEs accumulate at site of microvascular injury in diabetes, including the kidney, the retina, and within the vasculature. The enhanced formation of AGEs also exists in various disease, such as atherosclerosis, Alzheimer's disease, end-stage renal disease (ESRD), rheumatoid arthritis and liver cirrhosis.

AGEs can arise not only from glucose, but also from dicarbonyl compounds, short chain-reducing sugars and other metabolic pathways of glucose. This was prepared from D-glucose and BSA.

Package Size	1 mg (1 mL/vial)
Format	AGEs-BSA 1 mg/mL
Buffer	PBS
Storage	Store below -20°C . Once thawed, store at 4°C . Repeated freeze-thaw cycles should be avoided.
Production method	BSA was incubated under sterile conditions with D-glucose and 5 mM DTPA in 0.2 M phosphate buffer (pH7.4) at 37°C for 8 weeks. Low weight molecular reactants and D-glucose were removed using a PD-10 column and dialysis against PBS (pH7.4).

【Reference】

- 1 Takeuchi M, Makita Z, Bucala R, Suzuki T, Koike T, Kameda Y
Immunological evidence that non-carboxymethyllysine advanced glycation end-products are produced from short chain sugars and dicarbonyl compounds in vivo. *Mol Med.* 2000 Feb;6(2):114-25.
- 2 Takeuchi M, Yanase Y, Matsuura N, Yamagishi Si S, Kameda Y, Bucala R, Makita Z.
Immunological detection of a novel advanced glycation end-product. *Mol Med.* 2001 Nov;7(11):783-91.

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AGEs (advanced glycation end-products; 終末糖化産物) はグルコースなどの還元糖とタンパク質、脂質、核酸といった生体分子との間の非酵素的糖化反応で生成され、糖尿病、炎症、腎不全といった疾患や老化に伴い蓄積します。AGEs は、糖尿病網膜症や腎症といった糖尿病血管合併症の発症・進展に強く関与しています。さらに AGEs は、動脈硬化症、アルツハイマー病、末期腎不全、関節リウマチ、肝硬変などの様々な疾患で増加します。

AGEs は、グルコースに由来するだけでなく、ジカルボニル化合物、糖の自動酸化物、糖代謝中間体などからも生成されます。本製品は D-グルコース及び BSA を用いて作製しています。

容量	1 mg (1 mL/vial)
形状	AGEs-BSA 1 mg/mL、凍結品
バッファー	PBS
保管方法	-20℃以下 融解後は4℃で保存し、お早めにご使用下さい。 また凍結融解を繰り返すことは避けて下さい
製造方法	0.2 M リン酸バッファー (pH7.4)、5 mM DTPA 中、BSA と D-グルコースを 37 °C で 8 週間インキュベート後、PD-10 カラムを用いてゲルろ過、PBS (pH7.4) で透析

【参考文献】

- 1 Takeuchi M, Makita Z, Bucala R, Suzuki T, Koike T, Kameda Y
Immunological evidence that non-carboxymethyllysine advanced glycation end-products are produced from short chain sugars and dicarbonyl compounds in vivo. *Mol Med.* 2000 Feb;6(2):114-25.
- 2 Takeuchi M, Yanase Y, Matsuura N, Yamagishi Si S, Kameda Y, Bucala R, Makita Z.
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