

PRODUCT INFORMATION



AGE-BSA Reagent Set (Glucose modified)

Item No. 44738

Overview and Properties

Synonyms: Advanced Glycation End Product-Bovine Serum Albumin, Glucose AGE-BSA
Supplied as: Lyophilized from a solution in PBS, pH 7.4, at 10 mg per vial
Sterility: Sterile
Resuspension: Reconstitution with 0.2 ml of water will yield 50 mg/ml solution in 1X PBS

Materials Supplied

Item Number	Item Name	Quantity/Size	Storage Temperature
44739	AGE-BSA Reagent (Glucose modified)	1 vial/10 mg	-20°C
44740	BSA-Control (AGE BSA - Glucose modified)	1 vial/10 mg	-20°C

Storage and Stability

Store individual components as directed in the Materials Supplied section and use before the expiration date indicated on the label.

Description

Advanced glycation end products (AGEs) are formed from the non-enzymatic reaction of amino groups with reducing sugars.¹⁻³ AGEs have been implicated in several diseases, such as diabetes mellitus, non-diabetic nephropathy, macrovascular disease, Alzheimer's disease, cataracts, and aging. AGE receptors, such as the receptor for AGEs (RAGE), mediate biological responses to AGEs, including endocytic uptake and degradation and induction of cytokines and growth factors. AGE-BSA has been used as a standard for AGEs in ELISAs and to determine the effects of AGEs on cells in culture.⁴⁻⁶ AGE-BSA was produced by incubating BSA with glucose, followed by extensive dialysis. The AGE-BSA and BSA control were prepared at the same time with the same lot of BSA under sterile conditions, then filtered and aliquoted into sterile vials and lyophilized.

References

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3. Vistoli, G., De Maddis, D., Cipak, A., *et al.* Advanced glycoxidation and lipoxidation end products (AGEs and ALEs): An overview of their mechanisms of formation. *Free Radic. Res.* **47**(Suppl 1), 3-27 (2013).
4. Cai, W., Gao, Q.d., Zhu, L., *et al.* Oxidative stress-inducing carbonyl compounds from common foods: Novel mediators of cellular dysfunction. *Mol. Med.* **8**(7), 337-346 (2002).
5. Dedert, C., Mishra, V., Aggarwal, G., *et al.* Progranulin preserves autophagy flux and mitochondrial function in rat cortical neurons under high glucose stress. *Front. Cell. Neurosci.* **16**, 874258 (2022).
6. Xia, C., Zhang, J., Chen, H., *et al.* ShenQi ShenKang granule alleviates chronic kidney disease by inhibiting the PI3K/AKT/mTOR pathway and restoring autophagy flux and mitochondrial integrity. *Drug Des. Devel. Ther.* **19**, 3925-3947 (2025).

WARNING
THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA
This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

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