

Glycoaldehyde-AGE-BSA

CATALOG NUMBER: STA-348**STORAGE:** -20°C**QUANTITY AND CONCENTRATION:** 100 µL of 1.0 mg/mL Glycoaldehyde-AGE-BSA in 1X PBS.**SHELF LIFE:** 1 year from date of receipt under proper storage conditions; aliquot to avoid multiple freeze thaw cycles

Background

The non-enzymatic reaction of reducing carbohydrates with lysine side chains and N-terminal amino groups of macromolecules (proteins, phospholipids and nucleic acids) is called the Maillard reaction or glycation. The products of this process, termed advanced glycation end products (AGEs), adversely affect the functional properties of proteins, lipids and DNA. For example, *N*-ε-(Carboxymethyl) lysine (CML), one of the prevalent AGEs, has been implicated in oxidative stress and vascular damage. Tissue levels of AGE increase with age and the formation of AGEs is predominantly endogenous, though these products can also be derived from exogenous sources such as food and tobacco smoke. AGE modification of proteins can contribute to the pathophysiology of aging and long-term complications of diabetes, atherosclerosis and renal failure. AGEs also interact with a variety of cell-surface AGE-binding receptors (RAGE), leading either to their endocytosis and degradation or to cellular activation and pro-oxidant or pro-inflammatory events.

Glycoaldehyde-AGE-BSA was prepared by reacting BSA with glycoaldehyde, and followed by extensive dialysis. Fluorescence of AGEs was confirmed by fluorescence spectrophotometry with Ex./Em. = 370/440 nm (Figure 1).

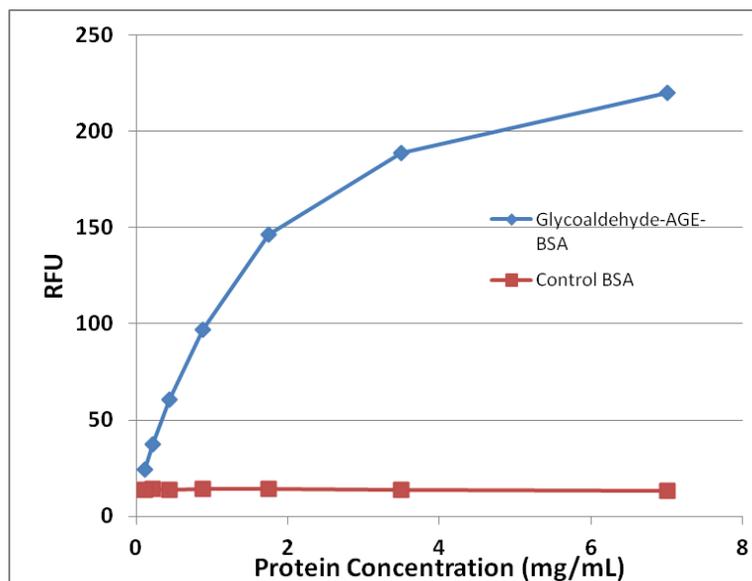


Figure 1. Fluorescence of Glycoaldehyde-AGE-BSA.

Methods

Dilute the Glycoaldehyde-AGE-BSA with SDS-PAGE reducing sample buffer to 1.0-10 µg/mL and boil for 5 minutes. Load 10 µL per lane for western blot analysis of Glycoaldehyde-AGE protein adducts.

References

1. Monnier, V., and Cerami, A. (1981) *Science* **211**, 491–493.
2. Dunn, J. A., Patrick, J. S., Thorpe, S. R., and Baynes, J. W. (1989) *Biochemistry* **28**, 9464-9468.
3. Ahmed, M. U., Brinkmann Frye, E., Degenhardt, T. P., Thorpe, S. R., and Baynes, J. W. (1997) *Biochem. J.* **324**, 565-570.
4. Sell, D. R., and Monnier, V. M. (1989) *J. Biol. Chem.* **264**, 21597-21602.
5. Onorato, J., Jenkins, A., Thorpe, S., and Baynes, J. (2000) *J. Biol. Chem.* **275**, 21177–21184.

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