

PRODUCT INFORMATION



BSA-Stearate Saturated Fatty Acid Complex (0.34 mM)

Item No. 43451

Synonyms: Bovine Serum Albumin-SA, Bovine Serum Albumin-Stearate, BSA-SA, BSA-Octadecanoic Acid

Supplied as: 0.34 mM Stearate:0.17 mM BSA in 150 mM sodium chloride

Storage: -20°C (as supplied)

Stability: ≥2 years

Item Origin: Animal/Bovine

Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Description

BSA-Stearate Saturated Fatty Acid Complex (0.34 mM) is composed of stearic acid (Item No. 10011298) and fatty acid-free bovine serum albumin (BSA) at an approximately 2:1 molar ratio of stearate:BSA. It can be used for efficient fatty acid delivery to cells in culture for the purpose of monitoring lipid metabolism and inflammatory signaling pathways.¹ It can also be used in colony formation, migration, and senescence assays to study the role of stearic acid in cancer *in vitro*.² Cayman's BSA-Stearate Saturated Fatty Acid Complex (0.34 mM) is suitable for use in short-term cell culture applications (acute treatment to 18 hours); however, for long-term applications (25+ hours) the product should be filter-sterilized using a 0.2 µm filter and sterile receptacle, which will not affect its performance. When used at the same lipid concentration as BSA-Stearate Saturated Fatty Acid Complex (1 mM) (Item No. 38107), which has a 6:1 molar ratio of stearate:BSA, this product provides a lower free stearate concentration, which may reduce the likelihood of acute lipotoxicity.³ For best results, it is recommended that this product be used in conjunction with Cayman's BSA Control for BSA-Fatty Acid Complexes (1 mM) (Item No. 34932), prepared with fatty acid-free BSA.

References

1. Alsabeeh, N., Chausse, B., Kakimoto, P.A., *et al.* Cell culture models of fatty acid overload: Problems and solutions. *Biochim. Biophys. Acta Mol. Cell Biol. Lipids* **1863**(2), 143-151 (2018).
2. Chen, P., Tian, J., Zhou, Y., *et al.* Metabolic flux analysis reveals the roles of stearate and oleate on CPT1C-mediated tumor cell senescence. *Int. J. Biol. Sci.* **19**(7), 2067-2080 (2023).
3. Richieri, G.V., Anel, A., and Kleinfeld, A.M. Interactions of long-chain fatty acids and albumin: Determination of free fatty acid levels using the fluorescent probe ADIFAB. *Biochemistry* **32**(29), 7574-7580 (1993).

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.

WARRANTY AND LIMITATION OF REMEDY

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