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).

CAYMAN CHEMICAL
1180 EAST ELLSWORTH RD
ANN ARBOR, MI 48108 · USA
PHONE: [800] 364-9897
[734] 971-3335
FAX: [734] 971-3640
CUSTSERV@CAYMANCHEM.COM
WWW.**CAYMANCHEM**.COM