PRODUCT INFORMATION

BSA-α-Linolenate ω-3 Polyunsaturated Fatty Acid Complex (5 mM)

Item No. 44864

Overview and Properties

Synonyms: Bovine Serum Albumin-ALA, Bovine Serum Albumin-α-Linolenate, BSA-ALA
Supplied as: 5 mM α-Linolenate:0.8 mM BSA (6:1 α-Linolenate:BSA) in 150 mM sodium chloride, pH 7.4
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-α-Linolenate ω-3 polyunsaturated fatty acid complex is composed of α-linolenic acid (Item No. 90210) and fatty acid-free bovine serum albumin (BSA) at an approximately 6:1 molar ratio of α-linolenate:BSA. It has been used for efficient fatty acid delivery to cells in culture for the purpose of monitoring fatty acid oxidation or similar processes in various cellular metabolic studies.[1-3] BSA/BSA-Fatty acids are 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. For best results, it is recommended that this product be used in conjunction with BSA control for BSA-fatty acid complexes (5 mM) (Item No. 29556).

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. Zhang, J., Kris-Etherton, P.M., Thompson, J.T., *et al.* Alpha-linolenic acid increases cholesterol efflux in macrophage-derived foam cells by decreasing stearoyl CoA desaturase 1 expression: Evidence for a farnesoid-X-receptor mechanism of action. *J. Nutr. Biochem.* **23(4)**, 400-409 (2012).
3. Hauge, M., Vestmar, M.A., Husted, A.S., *et al.* GPR40 (FFAR1) - Combined Gs and Gq signaling *in vitro* is associated with robust incretin secretagogue action *ex vivo* and *in vivo*. *Mol. Metab.* **4(1)**, 3-14 (2015).

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