PRODUCT INFORMATION

BSA-*cis*-Parinarate Polyunsaturated Fatty Acid Complex (1 mM)

Item No. 44413

Synonyms: Bovine Serum Albumin-*cis*-Parinarate, BSA-9(Z),11(E),13(E),15(Z)-Octadecatetraenoic Acid
Ex./Em. Max: 320/432 nm
Supplied as: 1 mM *cis*-parinarate:0.17 mM BSA (6:1 *cis*-parinarate:BSA) in 150 mM sodium chloride, pH 7.4
Storage: -20°C
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-*cis*-Parinarate Polyunsaturated Fatty Acid Complex (1 mM) is composed of *cis*-parinaric acid (Item No. 71430) and fatty acid-free bovine serum albumin (BSA) at an approximately 6:1 molar ratio of *cis*-parinarate: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.[1-3] In cell culture media, *cis*-parinaric acid displays excitation/emission maxima of 320/432 nm, respectively, and can be used to measure phospholipase and lipase activity or to monitor lipid peroxidation.[4-8] Cayman's BSA-*cis*-Parinarate Polyunsaturated Fatty Acid Complex (1 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. 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. Spector, A.A., John, K., and Fletcher, J.E. Binding of long-chain fatty acids to bovine serum albumin. *J. Lipid Res.* **10(1)**, 56-67 (1969).
2. Tuei, V.C., Ha, J.-S., and Ha, C.-E. Effects of human serum albumin complexed with free fatty acids on cell viability and insulin secretion in the hamster pancreatic β-cell line HIT-T15. *Life Sci.* **88(17-18)**, 810-818 (2011).
3. Simard, J.R., Zunszain, P.A., Ha, C.-E., *et al.* Locating high-affinity fatty acid-binding sites on albumin by x-ray crystallography and NMR spectroscopy. *Proc. Natl. Acad. Sci. U.S.A.* **102(50)**, 17958-17963 (2005).
4. Gomes, A., Fernandes, E., and Lima, J.L.F.C. Fluorescence probes used for detection of reactive oxygen species. *J. Biochem. Biophys. Methods* **65(2-3)**, 45-80 (2005).
5. Wolf, C., Sagaert, L., and Bereziat, G. A sensitive assay of phospholipase using the fluorescent probe 2-parinaroyllecithin. *Biochem. Biophys. Res. Commun.* **99(1)**, 275-283 (1981).
6. Beisson, F., Ferté, N., Nari, J., *et al.* Use of naturally fluorescent triacylglycerols from *Parinari glaberrimum* to detect low lipase activities from *Arabidopsis thaliana* seedlings. *J. Lipid Res.* **40(12)**, 2313-2321 (1999).
7. McGuire, S.O., James-Kracke, M.R., Sun, G.Y., *et al.* An esterification protocol for *cis*-parinaric acid-determined lipid peroxidation in immune cells. *Lipids* **32(2)**, 219-226 (1997).
8. de Hingh, Y.C.M., Meyer, J., Fischer, J.C., *et al.* Direct measurement of lipid peroxidation in submitochondrial particles. *Biochemistry* **34(39)**, 12755-12760 (1995).

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