PRODUCT INFORMATION

HSA-Oleate Monounsaturated Fatty Acid Complex (5 mM)

Item No. 45417

Synonym: HSA-OA, Human Serum Albumin-Oleate
Supplied as: 5 mM Oleate:0.8 mM HSA (6:1 oleate:HSA) in 150 mM sodium chloride, pH 7.4
Storage: -20°C
Stability: ≥2 years
Item Origin: Human

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

Description

HSA-Oleate monounsaturated fatty acid complex (5 mM) is composed of oleic acid (Item Nos. 90260 | 24659) and fatty acid-free human serum albumin (HSA) at an approximately 6:1 molar ratio of oleate:HSA. The HSA-oleate complex was prepared under sterile conditions, then filtered and aliquoted into sterile vials. HSA-Oleate complexes can be 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] Oleic acid is a major component of membrane phospholipids and one of the predominant non-esterified fatty acids in plasma.[4,5] It has anti-inflammatory effects in animal models of cardiovascular disease and type 2 diabetes.[5,6] Cayman's HSA-oleate complex is suitable for use in short- and long-term cell culture applications (25+ hours). For best results, it is recommended that this product be used in conjunction with HSA control for HSA-fatty acid complexes (5 mM) (Item No. 45019).

References

1. Trigatti, B.L. and Gerber, G.E. A direct role for serum albumin in the cellular uptake of long-chain fatty acids. *Biochem. J.* **308(Pt. 1),** 155-159 (1995).
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3. 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).
4. Wahle, K.W. and Peacock, L.I. Effects of isomeric *cis* and *trans* eighteen carbon monounsaturated fatty acids on porcine platelet function. *Biochim. Biophys. Acta* **1301(1-2),** 141-149 (1996).
5. Palomer, X., Pizarro-Delgado, J., Barroso, E., *et al.* Palmitic and oleic acid: The yin and yang of fatty acids in type 2 diabetes mellitus. *Trends Endocrinol. Metab.* **29(3),** 178-190 (2018).
6. Perdomo, L., Beneit, N., Otero, Y.F., *et al.* Protective role of oleic acid against cardiovascular insulin resistance and in the early and late cellular atherosclerotic process. *Cardiovasc. Diabetol.* **14,** 75 (2015).

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