

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).
2. Chausse, B., Kakimoto, P.A., Caldeira-da-Silva, C.C., et al. Distinct metabolic patterns during microglial remodeling by oleate and palmitate. *Biosci. Rep.* **39**(4), BSR20190072 (2019).
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).

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.

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