PRODUCT INFORMATION

HSA (fatty acid free)

Item No. 44507

Overview and Properties

Synonym:	Human Serum Albumin
Source:	Human HSA isolated from human serum
Amino Acids:	1-609 (full length)
Molecular Weight:	66.47 kDa
Supplied in:	Lyophilized from water
Storage:	-20°C
Stability:	≥1 year
Host:	Human

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

Description and Data

Human serum albumin (HSA) is a negative acute phase reactant and the most abundant protein in human plasma.[1] It is involved in many bioactive functions, such as regulation of plasma osmotic pressure, extracellular antioxidant defense, and the binding and transport of various endogenous and exogenous compounds. Serum levels of albumin are decreased in patients with myocardial infarction, malignancy, and renal disease, and hypoalbuminemia is associated with morbidity and mortality in hospitalized patients.[2,3] Hypoalbuminemia is also associated with death in patients with COVID-19.[2] Cayman's HSA (fatty acid free) protein has a fatty acid content of ≤0.01% by GC-MS and can be used for ELISA, functional assay, and Western blot (WB) applications. This product has had endogenous fatty acids removed and is intended for use in studies requiring precise experimental conditions, such as those focused on fatty acid cellular uptake and metabolism. *For in vitro use only*.

This protein was isolated from human serum, which was tested at the donor level and found negative for HIV 1/2 antibody, HBsAg, HCV antibody, HIV-1 (NAT), and HCV (NAT) by FDA-licensed screening assays. Although these materials have been tested, no known test method can guarantee that products derived from human source materials are free from infectious agents. The safe and responsible handling of this product is the responsibility of the customer. We accept no liability for injury or illness resulting from the use and/or handling of the product. The customer assumes responsibility for the proper disposal of all materials in accordance with federal and state regulations.

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PRODUCT INFORMATION

Description and Data Cont.

The fatty acids tested include:

Item Number	Item Name
20608	Lauric Acid methyl ester
9001867	Myristic Acid methyl ester
10007358	Palmitic Acid methyl ester
20605	Palmitoleic Acid methyl ester
20609	Stearic Acid methyl ester
20604	Oleic Acid methyl ester
20603	Linoleic Acid methyl ester
10006579	γ-Linolenic Acid methyl ester
26724	Arachidic Acid methyl ester
9000290	α-Linolenic Acid methyl ester
10005000	Stearidonic Acid methyl ester
20750	11(Z),14(Z)-Eicosadienoic Acid methyl ester
10006580	Dihomo-γ-Linolenic Acid methyl ester
26866	Docosanoic Acid methyl ester
17622	11(Z),14(Z),17(Z)-Eicosatrienoic Acid methyl ester
90014	Arachidonic Acid methyl ester
10006454	ω-3 Arachidonic Acid methyl ester
26868	Tricosanoic Acid methyl ester
9000295	Eicosapentaenoic Acid methyl ester
26706	Lignoceric Acid methyl ester
10006866	4(Z),10(Z),13(Z),16(Z)-Docosatetraenoic Acid methyl ester
9001351	Nervonic Acid methyl ester
11622	Heneicosapentaenoic Acid methyl ester
9001870	Docosapentaenoic Acid methyl ester
10006865	Docosahexaenoic Acid methyl ester

Cayman's HSA (fatty acid free) was tested by GCMS using the standard mix above. These include essential fatty acids that are endogenous in human serum. None of the fatty acids listed above were found in our sample.

References

1. Fanali, G., di Masi, A., Trezza, V., *et al.* Human serum albumin: From bench to bedside. *Mol. Aspects Med.* **33(3)**, 209-290 (2012).
2. Rabbani, G. and Ahn, S.N. Review: Roles of human serum albumin in prediction, diagnoses and treatment of COVID-19. *Int. J. Biol. Macromol.* **193(Pt A)**, 948-955 (2021).
3. Akirov, A., Masri-Iraqi, H., Atamna, A., *et al.* Low albumin levels are associated with mortality risk in hospitalized patients. *Am. J. Med.* **130(12)**, 1465.e11-1465.e19 (2017).

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