PRODUCT INFORMATION

3-hydroxy-3-methylglutaryl-Coenzyme A (sodium salt)

Item No. 25394

Formal Name: (2R,3S,4R,5R)-5-(6-amino-9H-purin-9-yl)-2-(((((((3R)-4-((3-((2-((4-carboxy-3-hydroxy-3-methylbutanoyl)thio)ethyl)amino)-3-oxopropyl)amino)-3-hydroxy-2,2-dimethyl-4-oxobutoxy)oxidophosphoryl)oxy)(hydroxy)phosphoryl)oxy)methyl)-4-hydroxytetrahydrofuran-3-yl phosphate, trisodium salt

Synonyms: DL-3-hydroxy-3-methylglutaryl-CoA, HMG-CoA, Hydroxymethylglutaryl-CoA

MF: $C_{27}H_{41}N_7O_{20}P_3S \bullet 3Na$

FW: 977.6

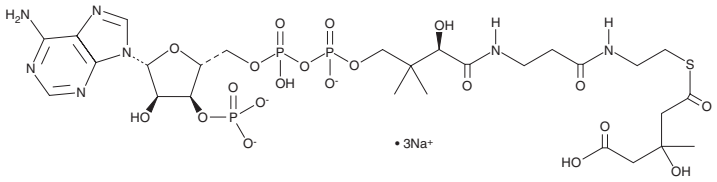
Purity: ≥95%

UV/Vis.: λ_{max}: 259 nm

Supplied as: A solid

Storage: -20°C

Stability: ≥4 years



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

Laboratory Procedures

3-hydroxy-3-methylglutaryl-Coenzyme A (HMG-CoA) (sodium salt) is supplied as a solid. A stock solution may be made by dissolving the HMG-CoA (sodium salt) in water. The solubility of HMG-CoA (sodium salt) in water is approximately 50 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

HMG-CoA is an intermediate in several metabolic pathways.[1-4] Conversion of HMG-CoA to mevalonate by HMG-CoA reductase is the rate-limiting first step in the cholesterol biosynthetic pathway.[2,3] Alternatively, HMG-CoA can be cleaved into acetyl-CoA and the ketone body acetoacetate in mitochondria by HMG-CoA lyase.[1,4] HMG-CoA is also an intermediate in the degradation of leucine.[4]

References

1. Laffel, L. Ketone bodies: A review of physiology, pathophysiology and application of monitoring to diabetes. *Diabetes Metab. Res. Rev.* **15(6)**, 412-426 (1999).
2. Espenshade, P.J. and Hughes, A.L. Regulation of sterol synthesis in eukaryotes. *Annu. Rev. Genet.* **41**, 401-427 (2007).
3. Honda, A., Salen, G., Nguyen, L.B., *et al.* Regulation of early cholesterol biosynthesis in rat liver: Effects of sterols, bile acids, lovastatin, and BM 15.766 on 3-hydroxy-3-methylglutaryl coenzyme A synthase and acetoacetyl coenzyme A thiolase activities. *Hepatology* **27(1)**, 154-159 (1998).
4. Berg, J.M., Tymoczko, J.L., and Stryer, L. Section 25.5 NAD^+, FAD, and coenzyme A are formed from ATP. *Biochemistry.* 5th ed., W.H. Freeman, New York (2002).

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