

## Acetoacetyl Coenzyme A sodium hydrate

### Chemical Properties

CAS No. :

Formula: C<sub>25</sub>H<sub>45</sub>N<sub>7</sub>Na<sub>3</sub>O<sub>22</sub>P<sub>3</sub>S

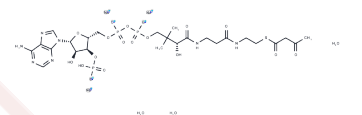
Molecular Weight: 989.61

Keep away from direct sunlight, Store at low temperature

Storage:

Powder: -20°C for 3 years | In solvent: -80°C for 1 year

Actual storage temperature shall be subject to the COA.



### Biological Description

Description	Acetoacetyl Coenzyme A sodium hydrate is a precursor of poly-β-hydroxybutyrate, which is closely related to the body's energy metabolism.
Targets(IC50)	Others
In vitro	Km values for Acetoacetyl Coenzyme A sodium hydrate, acetate, and propionate were calculated from intercept and slope replots. The Km, values for Acetoacetyl Coenzyme A the acetate as substrate were 0.021 mM. The Km, values for Acetoacetyl Coenzyme A the propionate as substrate were 0.007 mM. The Km, values for Acetoacetyl Coenzyme A the butyrate as substrate were 0.056 mM. The Km, values for the carboxylic acids were remarkably high. [1]

### Solubility Information

Solubility	H <sub>2</sub> O: 8 mg/mL (8.08 mM), Sonication is recommended. PBS (pH 7.2): 10 mg/mL (10.1 mM), Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
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### Preparing Stock Solutions

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	1mg	5mg	10mg
1 mM	1.0105 mL	5.0525 mL	10.105 mL
5 mM	0.2021 mL	1.0105 mL	2.021 mL
10 mM	0.101 mL	0.5052 mL	1.0105 mL
50 mM	0.0202 mL	0.101 mL	0.2021 mL

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Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

### Reference

Wiesenborn DP, et al. Coenzyme A transferase from *Clostridium acetobutylicum* ATCC 824 and its role in the uptake of acids. *Appl Environ Microbiol.* 1989 Feb;55(2):323-9.

LYNEN F, et al. Enzymes of fatty acid metabolism. *Biochim Biophys Acta.* 1953 Sep-Oct;12(1-2):299-314. doi: 10.1016/0006-3002(53)90149-8.

Daum RS, et al. An inherited disorder of isoleucine catabolism causing accumulation of alpha-methylacetoacetate and alpha-methyl-beta -hydroxybutyrate, and intermittent metabolic acidosis. *Pediatr Res.* 1973 Mar;7(3):149-60.

Miziorko HM. Enzymes of the mevalonate pathway of isoprenoid biosynthesis. *Arch Biochem Biophys.* 2011 Jan 15; 505(2):131-43.

Jacquel, N., Lo, C.-W., Wei, Y.-H., et al. Isolation and purification of bacterial poly(3-hydroxyalkanoates). *Biochem. Eng. J.* 39(1), 15-27 (2008).

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