Data Sheet (Cat.No.T6805)

TargetMol

Choline bitartrate

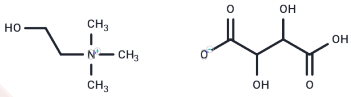
Chemical Properties

CAS No. : 87-67-2

Formula: C5H14NO·C4H5O6

Molecular Weight: 253.25

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	Choline bitartrate (2-hydroxyethyl(trimethyl)azanium) is a form of the nutrient choline which is found in foods. Choline is necessary for normal liver and kidney function and a component of the neurotransmitter acetylcholine, a chemical that facilitates communication between the nerves and muscles.
Targets(IC50)	Endogenous Metabolite,AChR
In vitro	Choline is an essential nutrient needed for the structural integrity and signaling functions of cell membranes; for normal cholinergic neurotransmission; for normal muscle function; for lipid transport from liver; and it is the major source of methyl groups in the diet[3].
In vivo	Choline is critical for normal brain development. Choline deficiency has other health consequences—it is associated with liver and muscle damage and with an exaggerated plasma homocysteine rise after a methionine load. Elevated plasma homocysteine is an independent risk factor for cardiovascular disease and stroke in humans[3]. But choline bitartrate does not improve remembrance of spatial locations, declarative items, and verbal words[1].

Solubility Information

Solubility	DMSO: 55.6 mg/mL (219.55 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+40% PEG300+5% Tween 80+45% Saline: 2 mg/mL (7.9 mM),Sonication is recommended. 10% DMSO+90% Saline: 5.56 mg/mL (21.95 mM),Solution. *Please add the solvents sequentially, clarifying the solution as much as possible before adding the next one. Dissolve by heating and/or sonication if necessary. Working solution is recommended to be prepared and used immediately. The formulation provided above is for reference purposes only. In vivo formulations may vary and should be modified based on specific experimental conditions.*

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	3.9487 mL	19.7433 mL	39.4867 mL
5 mM	0.7897 mL	3.9487 mL	7.8973 mL
10 mM	0.3949 mL	1.9743 mL	3.9487 mL
50 mM	0.079 mL	0.3949 mL	0.7897 mL

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

Lippelt DP, et al. PLoS One. 2016, 11(6):e0157714.
Schugar RC, et al. PLoS One. 2013, 8(8):e74806.
Zeisel SH, et al. Annu Rev Nutr. 2006, 26:229-50.