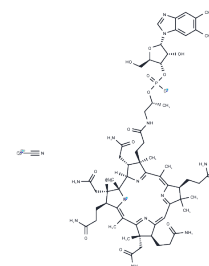


## Vitamin B12

## Chemical Properties

CAS No. :	68-19-9
Formula:	C63H88CoN14O14P
Molecular Weight:	1355.37
Storage:	Keep away from direct sunlight Powder: -20°C for 3 years   In solvent: -80°C for 1 year <i>Actual storage temperature shall be subject to the COA.</i>



## Biological Description

Description	Cyanocobalamin is a cobalt-containing coordination compound generated by intestinal microbes and a natural water-soluble vitamin of the B-complex family that must combine with Intrinsic Factor for absorption by the intestine. Cyanocobalamin is necessary for hematopoiesis, neural metabolism, DNA, and RNA production, and carbohydrate, fat, and protein metabolism. B12 improves iron functions in the metabolic cycle and assists folic acid in choline synthesis. B12 metabolism is interconnected with that of folic acid. Vitamin B12 (Cobalamin) deficiency causes pernicious anemia, megaloblastic anemia, and neurologic lesions.
Targets(IC50)	Endogenous Metabolite

## Solubility Information

Solubility	Ethanol: 10 mg/mL (7.38 mM),Sonication is recommended. H2O: 6 mg/mL (4.43 mM),Sonication is recommended. DMSO: 2.71 mg/mL (2 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: 1 mg/mL (0.74 mM),Sonication is recommended. <i>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.</i>

### Preparing Stock Solutions

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	<b>1mg</b>	<b>5mg</b>	<b>10mg</b>
1 mM	0.7378 mL	3.689 mL	7.3781 mL
5 mM	0.1476 mL	0.7378 mL	1.4756 mL
10 mM	0.0738 mL	0.3689 mL	0.7378 mL
50 mM	0.0148 mL	0.0738 mL	0.1476 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

Ghazanfari S, et al. Drug Res (Stuttg). 2014 Mar;64(3):113-7.

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