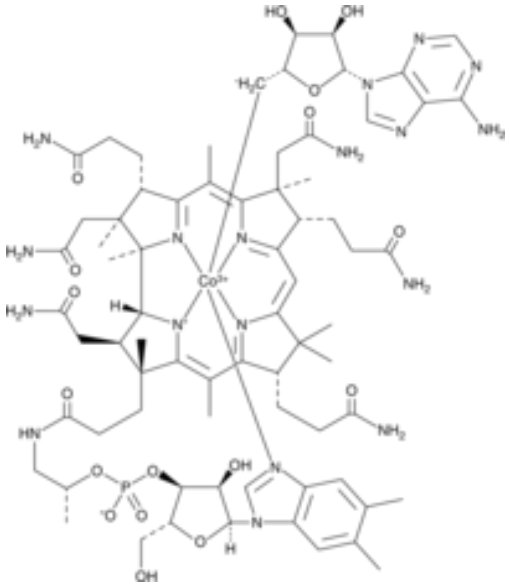
Product Data Sheet

Product Name: Coenzyme B12
Cat. No.: GC43296

Chemical Properties

Cas. No.	13870-90-1		
SMILES	O[C@@H]1[C@H](O[C@@H](N2C3=NC=NC(N)=C3N=C2)[C@@H]1O)[CH2-][Co+3]456([N]7=CN([C@]8([H])[C@H](O)[C@H](O9)[C@@H](CO)O8)C%10=CC(C)=C(C)C=C7%10)[N]%11=C%12[C@@H](CCC(N)=O)[C@@](CC(N)=O)(C)[C@]%11(C)[C@]([C@H](CC(N)=O)[C@]%13(CCC(NC[C@@H](C)O[P]9([O-])=O)=		
Formula	C72H100CoN18O17P	M.Wt	1579.6
Solubility	DMSO : 25 mg/mL (15.83 mM; Need ultrasonic); H_2O : 5 mg/mL (3.17 mM; Need ultrasonic)	Storage	Store at -20°C
General tips	For obtaining a higher solubility , please warm the tube at 37 °C and shake it in the ultrasonic bath for a while.Stock solution can be stored below -20°C for several months.		
Shipping Condition	Evaluation sample solution : ship with blue ice All other available size: ship with RT , or blue ice upon request.		

Structure



Background

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Coenzyme B12 (adenosylcobalamin; AdoCbl) is a biologically active form of vitamin B12 . It belongs to the corrinoid group of compounds, which contain a corrin macrocycle, and is produced only by certain bacteria and archaea. It is a cofactor for various enzymes including mutases, eliminases, aminomutases, and a reductase. These enzymes catalyze reactions that generate free radicals through release of the adenosyl group, allowing usually unreactive molecules to become reactive. Only one of these enzymes, methylmalonyl CoA mutase, is found in mammals, therefore, the other enzymes must be taken in through the diet. Genetic mutations in enzymes that synthesize AdoCbl lead to AdoCbl deficiency and methylmalonic aciduria. Formulations containing AdoCbl are used to treat patients with this disorder.

Caution: Product has not been fully validated for medical applications. For research use only.
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