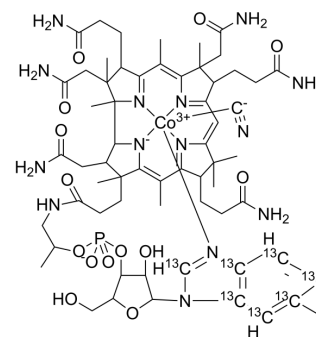


Vitamin B12-¹³C₇

| | |
|---------------------------|--|
| Cat. No.: | HY-B0315S |
| Molecular Formula: | C ₅₆ ¹³ C ₇ H ₈₈ CoN ₁₄ O ₁₄ P |
| Molecular Weight: | 1362.31 |
| Target: | Endogenous Metabolite |
| Pathway: | Metabolic Enzyme/Protease |
| Storage: | Solution, -20°C, protect from light, 2 years |



SOLVENT & SOLUBILITY

In Vitro

DMSO : 20.83 mg/mL (15.29 mM; ultrasonic and warming and heat to 60°C)
 H2O : 6.25 mg/mL (4.59 mM; ultrasonic and warming and heat to 60°C)

| Preparing Stock Solutions | Solvent | | 1 mg | 5 mg | 10 mg |
|---------------------------|---------------|------|-----------|-----------|-----------|
| | Concentration | Mass | | | |
| | 1 mM | | 0.7340 mL | 3.6702 mL | 7.3405 mL |
| | 5 mM | | 0.1468 mL | 0.7340 mL | 1.4681 mL |
| | 10 mM | | 0.0734 mL | 0.3670 mL | 0.7340 mL |

Please refer to the solubility information to select the appropriate solvent.

BIOLOGICAL ACTIVITY

Description

Vitamin B12-¹³C₇ is the ¹³C-labeled Vitamin B12. Vitamin B12 is a vitamin. Vitamin B12 plays a key role in the normal functioning of the brain and nervous system, and for the formation of blood[1][2].

In Vitro

Stable heavy isotopes of hydrogen, carbon, and other elements have been incorporated into drug molecules, largely as tracers for quantitation during the drug development process. Deuteration has gained attention because of its potential to affect the pharmacokinetic and metabolic profiles of drugs^[1].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

- [1]. Russak EM, et al. Impact of Deuterium Substitution on the Pharmacokinetics of Pharmaceuticals. *Ann Pharmacother*. 2019;53(2):211-216.
- [2]. http://en.wikipedia.org/wiki/Vitamin_B12
- [3]. Banerjee, R. and S.W. Ragsdale, The many faces of vitamin B12: catalysis by cobalamin-dependent enzymes. *Annu Rev Biochem*, 2003. 72: p. 209-47.

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

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