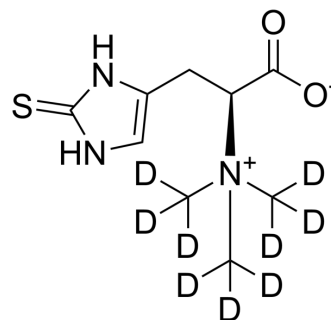


## Ergothioneine-d<sub>9</sub>

<b>Cat. No.:</b>	HY-N1914S1
<b>Molecular Formula:</b>	C <sub>9</sub> H <sub>6</sub> D <sub>9</sub> N <sub>3</sub> O <sub>2</sub> S
<b>Molecular Weight:</b>	238.35
<b>Target:</b>	Endogenous Metabolite
<b>Pathway:</b>	Metabolic Enzyme/Protease
<b>Storage:</b>	-20°C, sealed storage, away from moisture * In solvent : -80°C, 6 months; -20°C, 1 month (sealed storage, away from moisture)



### SOLVENT & SOLUBILITY

#### In Vitro

H<sub>2</sub>O : 50 mg/mL (209.78 mM; Need ultrasonic)

Solvent	Mass	Concentration		
		1 mg	5 mg	10 mg
Preparing Stock Solutions	1 mM	4.1955 mL	20.9776 mL	41.9551 mL
	5 mM	0.8391 mL	4.1955 mL	8.3910 mL
	10 mM	0.4196 mL	2.0978 mL	4.1955 mL

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

### BIOLOGICAL ACTIVITY

#### Description

Ergothioneine-d<sub>9</sub> is the deuterium labeled Ergothioneine. Ergothioneine, an imidazole-2-thione derivative of histidine betaine, is synthesized by certain bacteria and fungi. Ergothioneine is generally considered an antioxidant[1].

#### 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<sup>[1]</sup>.

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]. Oumari M, et al. Regeneration of ergothioneine after reaction with singlet oxygen. *Free Radic Biol Med.* 2019 Apr;134:498-504.

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

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