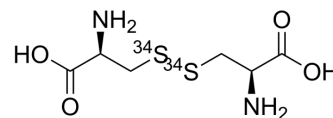


L-Cystine-³⁴S₂

Cat. No.:	HY-N0394S3	
CAS No.:	113512-08-6	
Molecular Formula:	C ₆ H ₁₂ N ₂ O ₄ ³⁴ S ₂	
Molecular Weight:	244.11	
Target:	Ferroptosis; Endogenous Metabolite	
Pathway:	Apoptosis; Metabolic Enzyme/Protease	
Storage:	Powder	-20°C 3 years
	In solvent	-80°C 6 months
		-20°C 1 month



SOLVENT & SOLUBILITY

In Vitro

0.1 M NaOH : 3.33 mg/mL (13.64 mM; ultrasonic and warming and adjust pH to 11 with NaOH and heat to 70°C)
 0.1 M NaOH : 3.33 mg/mL (13.64 mM; ultrasonic and warming and adjust pH to 11 with NaOH and heat to 70°C)
 0.1 M HCL : 2.5 mg/mL (10.24 mM; ultrasonic and adjust pH to 2 with HCL)
 0.1 M HCL : 2.5 mg/mL (10.24 mM; ultrasonic and adjust pH to 2 with HCL)
 DMSO : ≥ 1 mg/mL (4.10 mM)
 DMSO : ≥ 1 mg/mL (4.10 mM)
 H₂O : ≥ 0.1 mg/mL (0.41 mM)
 H₂O : ≥ 0.1 mg/mL (0.41 mM)
 * "≥" means soluble, but saturation unknown.

	Solvent Concentration	Mass		
		1 mg	5 mg	10 mg
Preparing Stock Solutions	1 mM	4.0965 mL	20.4826 mL	40.9651 mL
	5 mM	0.8193 mL	4.0965 mL	8.1930 mL
	10 mM	0.4097 mL	2.0483 mL	4.0965 mL

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

BIOLOGICAL ACTIVITY

Description

L-Cystine-³⁴S₂ is the ³⁴S-labeled L-Cystine. L-Cystine is an amino acid and intracellular thiol, which plays a critical role in the regulation of cellular processes.

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]. Ohtsu I, et al. Uptake of L-cystine via an ABC transporter contributes defense of oxidative stress in the L-cystine export-dependent manner in Escherichia coli. PLoS One. 2015 Apr 2;10(3):e0120619.

[2]. Russak EM, et al. Impact of Deuterium Substitution on the Pharmacokinetics of Pharmaceuticals. Ann Pharmacother. 2019;53(2):211-216.

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

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