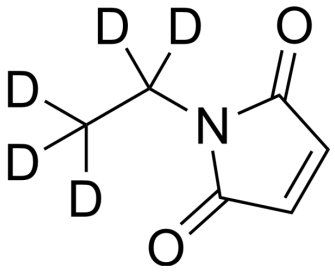
N-Ethylmaleimide-d_5

Cat. No.:	HY-D0843S
CAS No.:	360768-37-2
Molecular Formula:	$C_6H_2D_5NO_2$
Molecular Weight:	130.16
Target:	Deubiquitinase; Cathepsin
Pathway:	Cell Cycle/DNA Damage; Metabolic Enzyme/Protease
Storage:	Powder -20°C 3 years 4°C 2 years In solvent -80°C 6 months -20°C 1 month



SOLVENT & SOLUBILITY

In Vitro

DMSO : 100 mg/mL (768.29 mM; Need ultrasonic)
H_2O : 50 mg/mL (384.14 mM; Need ultrasonic)
H_2O : 50 mg/mL (384.14 mM; Need ultrasonic)
Ethanol : 12.5 mg/mL (96.04 mM; Need ultrasonic)
Ethanol : 12.5 mg/mL (96.04 mM; Need ultrasonic)

Preparing Stock Solutions

Solvent / Mass / Concentration	1 mg	5 mg	10 mg
1 mM	7.6829 mL	38.4143 mL	76.8285 mL
5 mM	1.5366 mL	7.6829 mL	15.3657 mL
10 mM	0.7683 mL	3.8414 mL	7.6829 mL

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

BIOLOGICAL ACTIVITY

Description

N-Ethylmaleimide-d_5 is the deuterium labeled N-Ethylmaleimide. N-Ethylmaleimide (NEM), a reagent that alkylates free sulfhydryl groups, is a cysteine protease inhibitor[1]. N-ethylmaleimide specific inhibits phosphate transport in mitochondria[2]. N-Ethylmaleimide is also a deubiquitinating enzyme inhibitor[3].

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]. Wu KH, et al. Cys32 and His105 are the critical residues for the calcium-dependent cysteine proteolyticactivity of CvaB, an ATP-binding cassette transporter. J Biol Chem. 2004 Jan 9;279(2):901-9.

[3]. Hatase O , et al. Specific inhibition of phosphate transport in mitochondria by N-ethylmaleimide. Journal of Bioenergetics, 1973, 5(1):1-15.

[4]. Choo YS, et al. Detection of protein ubiquitination. J Vis Exp. 2009;(30):1293. Published 2009 Aug 19. doi:10.3791/1293

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

Tel: 609-228-6898 Fax: 609-228-5909 E-mail: tech@MedChemExpress.com

Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA