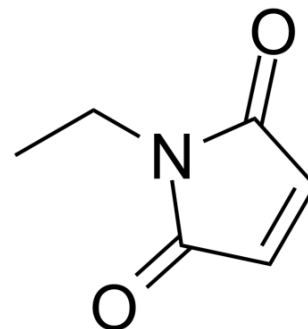


N-Ethylmaleimide

Cat. No.:	HY-D0843
CAS No.:	128-53-0
Molecular Formula:	C ₆ H ₇ NO ₂
Molecular Weight:	125.13
Target:	Cathepsin; Deubiquitinase
Pathway:	Metabolic Enzyme/Protease; Cell Cycle/DNA Damage
Storage:	4°C, protect from light * In solvent : -80°C, 6 months; -20°C, 1 month (protect from light)



SOLVENT & SOLUBILITY

In Vitro

H₂O : 50 mg/mL (399.58 mM; Need ultrasonic)
 DMSO : 50 mg/mL (399.58 mM; Need ultrasonic)
 Ethanol : 12.5 mg/mL (99.90 mM; Need ultrasonic)

Preparing Stock Solutions	Solvent Concentration	Mass		
		1 mg	5 mg	10 mg
	1 mM	7.9917 mL	39.9584 mL	79.9169 mL
	5 mM	1.5983 mL	7.9917 mL	15.9834 mL
	10 mM	0.7992 mL	3.9958 mL	7.9917 mL

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

In Vivo

- Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
Solubility: ≥ 2.08 mg/mL (16.62 mM); Clear solution
- Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
Solubility: ≥ 2.08 mg/mL (16.62 mM); Clear solution
- Add each solvent one by one: 10% DMSO >> 90% corn oil
Solubility: ≥ 2.08 mg/mL (16.62 mM); Clear solution
- Add each solvent one by one: PBS
Solubility: 100 mg/mL (799.17 mM); Clear solution; Need ultrasonic

BIOLOGICAL ACTIVITY

Description

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].

IC₅₀ & Target

Cysteine protease^[1]

REFERENCES

- [1]. Wu KH, et al. Cys32 and His105 are the critical residues for the calcium-dependent cysteine proteolytic activity of CvaB, an ATP-binding cassette transporter. J Biol Chem. 2004 Jan 9;279(2):901-9.
- [2]. Hatase O, et al. Specific inhibition of phosphate transport in mitochondria by N-ethylmaleimide. Journal of Bioenergetics, 1973, 5(1):1-15.
- [3]. Choo YS, et al. Detection of protein ubiquitination. J Vis Exp. 2009;(30):1293. Published 2009 Aug 19. doi:10.3791/1293
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Caution: Product has not been fully validated for medical applications. For research use only.

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