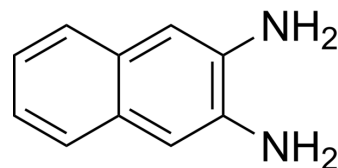


2,3-Diaminonaphthalene

Cat. No.:	HY-D0073
CAS No.:	771-97-1
Molecular Formula:	C ₁₀ H ₁₀ N ₂
Molecular Weight:	158.2
Target:	Fluorescent Dye
Pathway:	Others
Storage:	4°C, protect from light * In solvent : -80°C, 6 months; -20°C, 1 month (protect from light)



SOLVENT & SOLUBILITY

In Vitro	DMSO : 100 mg/mL (632.11 mM; Need ultrasonic)				
		Solvent Concentration	Mass		
	Preparing Stock Solutions		1 mg	5 mg	10 mg
		1 mM	6.3211 mL	31.6056 mL	63.2111 mL
		5 mM	1.2642 mL	6.3211 mL	12.6422 mL
	10 mM	0.6321 mL	3.1606 mL	6.3211 mL	
Please refer to the solubility information to select the appropriate solvent.					
In Vivo	1. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline Solubility: ≥ 2.5 mg/mL (15.80 mM); Clear solution 2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline) Solubility: ≥ 2.5 mg/mL (15.80 mM); Clear solution				

BIOLOGICAL ACTIVITY

Description	2,3 Diaminonaphthalene is a highly selective colorimetric and fluorometric reagent for selenium detection and also used for the fluorometric determination of nitrite.
In Vitro	Poly(2,3-diaminonaphthalene) microspheres as a novel quencher for fluorescence-enhanced nucleic acid detection ^[1] . 2,3-Diaminonaphthalene (DAN) is possibly a carcinogenic reagent ^[2] . MCE has not independently confirmed the accuracy of these methods. They are for reference only.

PROTOCOL

Kinase Assay [3]

Various concentrations of each drug are incubated for 60 min at 37°C in OS-mL reaction volumes containing PBS (pH 7.4), 200 µM 2,3-Diaminonaphthalene (DAN) and 40 µM Sp/NO. Spermine/NO will spontaneously decompose at pH7.4 to produce 2 mol of NO and 1 mol of spermine with a half-life of 39 min at 37°C. Following the incubation period, 2.5 mL of 10 mM NaOH is added to each tube to stop the reaction. The NO-dependent N-nitrosation of 2,3-Diaminonaphthalene to yield its highly fluorescent N-nitrosated derivative, 2,3-naphthotriazole, is quantified by measuring the fluorescence of each sample using an excitation wavelength of 375 nm and an emission wavelength of 450nm. The concentration of Triazole is determined using standards of the pure 2,3-naphthotriazole^[3].

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

REFERENCES

- [1]. Tian J, et al. Poly(2,3-diaminonaphthalene) microspheres as a novel quencher for fluorescence-enhanced nucleic acid detection. *Analyst*. 2011 Jun 7;136(11):2221-4.
- [2]. Martínez-Tomé MJ, et al. Immobilization and characterization of 2,3-diaminonaphthalene/cyclodextrin complexes in a sol-gel matrix: a new fluorimetric sensor for nitrite. *J Fluoresc*. 2009 Jan;19(1):119-25.
- [3]. Grisham MB, et al. Effects of aminosalicylates and immunosuppressive agents on nitric oxide-dependent N-nitrosation reactions. *Biochem Pharmacol*. 1994 May 18;47(10):1897-902.

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

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