

2,3-Diaminonaphthalene

Chemical Properties

CAS No. : 771-97-1

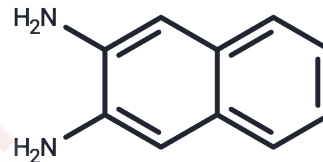
Formula: C₁₀H₁₀N₂

Molecular Weight: 158.2

Keep away from direct sunlight

Storage: Powder: -20°C for 3 years | In solvent: -80°C for 1 year

Actual storage temperature shall be subject to the COA.



Biological Description

Description	2,3-Diaminonaphthalene is a highly selective fluorometric and colorimetric reagent for selenium detection, and it is also used for the fluorometric determination of nitrite.
Targets(IC50)	Others
Cell Research	<p>Instructions</p> <p>I. Detection of selenium ions:</p> <p>1. Solution preparation:</p> <p>1) First dissolve 2,3-Diaminonaphthalene (usually provided in solid form) in an appropriate solvent, usually pure water or an appropriate amount of acidic solution. The concentration is generally 0.1-10 mM, and the specific concentration can be adjusted according to experimental requirements.</p> <p>2) It is necessary to prepare a solution containing an appropriate amount of selenium ions, and the concentration is selected according to the experimental design and the required detection sensitivity.</p> <p>2. Reaction steps:</p> <p>1) Add 2,3-Diaminonaphthalene solution to the sample, and often react in an acidic environment (such as pH 4-5) to promote the formation of products.</p> <p>2) The reaction temperature is generally maintained at room temperature, and the reaction time is usually 10-30 minutes. The specific time can be optimized as needed.</p> <p>3. Detection:</p> <p>1) Colorimetry: Use a spectrophotometer to detect the absorbance of the reaction product. Usually, the reaction product has an absorption peak at a specific wavelength (such as 320-350 nm). 2) Fluorescence method: If fluorescence determination is performed, it is necessary to excite at a specific wavelength (such as 320 nm) and detect fluorescence emission (usually 400-460 nm). The fluorescence intensity of the product is proportional to the concentration of selenium ions.</p> <p>3) Data analysis: By comparing with the standard curve, the selenium ion concentration in the sample can be quantitatively analyzed.</p> <p>The above information is based on published literature. Experimental procedures should be appropriately modified to meet specific research demands.</p>

Solubility Information

Solubility	DMSO: 90 mg/mL (568.9 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+40% PEG300+5% Tween-80+45% Saline: 3.3 mg/mL (20.86 mM),Sonication is recommended. <i>Please add the solvents sequentially, clarifying the solution as much as possible before adding the next one. Dissolve by heating and/or sonication if necessary. Working solution is recommended to be prepared and used immediately. The formulation provided above is for reference purposes only. In vivo formulations may vary and should be modified based on specific experimental conditions.</i>

Preparing Stock Solutions

	1mg	5mg	10mg
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
50 mM	0.1264 mL	0.6321 mL	1.2642 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

Reference

Xie Q, et al. A Ratiometric Fluorescence Probe for Selective Detection of ex vivo Methylglyoxal in Diabetic Mice. *ChemistryOpen*. 2022 May; 11(5):e202200055.

Kertesz V, Carper DL, Cahill JF. High-throughput mass spectrometry analysis using immediate drop-on-demand technology coupled with an open port sampling interface. *Rapid Commun Mass Spectrom*. 2024 Feb 28;38(4): e9687.

Frey L, et al. Building Blocks and COFs Formed in Concert-Three-Component Synthesis of Pyrene-Fused Azaacene Covalent Organic Framework in the Bulk and as Films. *Angew Chem Int Ed Engl*. 2023 Jul 24;62(30):e202302872.

Inhibitor · Natural Compounds · Compound Libraries · Recombinant Proteins

This product is for Research Use Only · Not for Human or Veterinary or Therapeutic Use

Tel:781-999-4286 E_mail:info@targetmol.com Address:34 Washington Street,Wellesley Hills,MA 02481