N-Aminofluorescein

Cat. No.: HY-D1601

CAS No.: 98907-26-7

Molecular Formula: $C_{20}H_{14}N_2O_4$

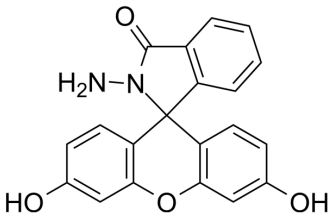
Molecular Weight: 346.34

Target: Fluorescent Dye

Pathway: Others

Storage: -20°C, protect from light

* In solvent : -80°C, 6 months; -20°C, 1 month (protect from light)



SOLVENT & SOLUBILITY

In Vitro

DMSO : 125 mg/mL (360.92 mM; Need ultrasonic)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	2.8873 mL	14.4367 mL	28.8734 mL
	5 mM	0.5775 mL	2.8873 mL	5.7747 mL
	10 mM	0.2887 mL	1.4437 mL	2.8873 mL

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

BIOLOGICAL ACTIVITY

Description

N-Aminofluorescein is a fluorescein hydrazide with spiro form, a highly selective and sensitive fluorescence probe for Cu^{2+}. N-Aminofluorescein has no selective fluorescence response to other common metal ions, can be used for direct detection of Cu^{2+} in biological systems with λex/em=495/516 nm[1][2].

In Vitro

Guidelines (Following is our recommended protocol. This protocol only provides a guideline, and should be modified according to your specific needs).

N-Aminofluorescein consists of a fluorescein moiety and a hydrazide group to recognize and bind Cu^{2+}, can promote the hydrolysis of amide[1].

N-Aminofluorescein (FG) shows selectivity on Cu^{2+} and shows the absorption and emission bands at 632 nm and 515 nm in 70% aqueous HEPES buffered solution (pH 7.4) containing Cu^{2+}[2].

Guidelines (Following is our recommended protocol. This protocol only provides a guideline, and should be modified according to your specific needs).

General procedure for Cu^{2+} determination[1]:

1.Prepare the 1.0 mM stock solution of spiro form fluorescein hydrazide in ethanol;

2.Conduct the fluorescence-on reaction in 0.01 M Tris-HCl buffer (pH 7.2), with 10 μM N-Aminofluorescein;

3.Add an appropriate volume of sample solution with a final Cu^{2+} concentration of not more than 10 μM, and adjust the final volume 10 mL with 0.01 M Tris-HCl buffer (pH 7.2);

4.After 2 h, transfer a 3-mL portion of the solution to a 1-cm quartz cell, and measure the fluorescence intensity/spectrum at room temperature with λex/em = 495/516 nm and both excitation and emission slit widths of 5 nm;?
5.In the meantime, prepare a blank solution containing no Cu^{2+} and measure with the same conditions for comparison.
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

[1]. Chen X, et al. A selective fluorescence-on reaction of spiro form fluorescein hydrazide with Cu(II). Anal Chim Acta. 2006 Aug 11;575(2):217-22.

[2]. Uzra Diwan, et al. A water compatible turn ‘on’ optical probe for Cu2+ based on a fluorescein-sugar conjugate. Sensors and Actuators B: Chemical. 2014;196:345-351.

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