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Lieferung & Zahlungsart

siehe unsere Liefer- und Versandbedingungen

Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

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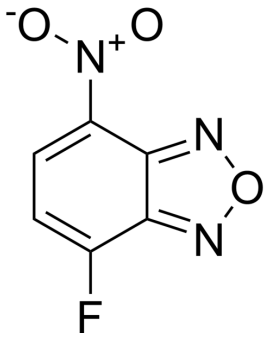
NBD-F

Cat. No.:	HY-D0785
CAS No.:	29270-56-2
Molecular Formula:	$C_6H_2FN_3O_3$
Molecular Weight:	183.1
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 (546.15 mM; Need ultrasonic)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	5.4615 mL	27.3075 mL	54.6150 mL
	5 mM	1.0923 mL	5.4615 mL	10.9230 mL
	10 mM	0.5461 mL	2.7307 mL	5.4615 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 (13.65 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

NBD-F (4-Fluoro-7-nitrobenzofurazan) is a pro-fluorescent reagent which is developed for amino acid analysis. NBD-F reacts with primary or secondary amines to produce a fluorescent product and used for analysis of amino acids and low molecular weight amines[1].

In Vitro

As the percentage of the organic phase changes, the retention time of NBD-F remains relatively stable, while the retention times of the derivatization products changes. The pH of the mobile phase affects the separation of the NBD-F and the derivatization products[1]. NBD-F is a fluorescent derivatization reagent that is originally developed for amino acid analysis, and recently applied to the analysis of other amino acid derivatives such as N-methyl-D-aspartic acid and glutathione. The use of NBD-F appears to have several advantages in that the derivatization procedure is simple and its derivatives are highly stable[2].

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

PROTOCOL

Kinase Assay [1]

An accurately weighed quantity (0.0183 g) of NBD-F is transferred into a 1 mL centrifuge tube, dissolved in acetonitrile and made up to volume with the same solvent to produce stock solutions of 0.1 M. The solution is protected from light and stored at -20°C until analyzed. A 100 µL aliquot of mixed amino acids solution or sample supernatant, 175 µL of borate buffer solution, 200 µL of acetonitrile and 25 µL of NBD-F working solution are mixed in a 1.5 mL centrifuge tube. The well-mixed solution is allowed to react at 60°C in the water bath for 7 min, excluding light. NBD-F reacts with amino group and enables amino acids to be detected with UV detection. After cooling to room temperature, 10 µL of the solution is injected into the equilibrated HPLC system[1].

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

REFERENCES

[1]. Wu X, et al. Determination of amino acid neurotransmitters in rat hippocampi by HPLC-UV using NBD-F as a derivative. Biomed Chromatogr. 2014 Apr;28(4):459-62.

[2]. Ishikawa T, et al. Development of an LC-MS/MS method for the analysis of free sphingoid bases using 4-fluoro-7-nitrobenzofurazan (NBD-F). Lipids. 2014 Mar;49(3):295-304.

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