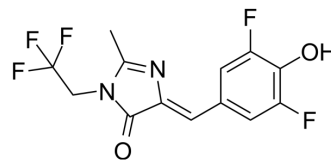


DFHBI-1T

Cat. No.:	HY-110251
CAS No.:	1539318-36-9
Molecular Formula:	C ₁₃ H ₉ F ₅ N ₂ O ₂
Molecular Weight:	320.21
Target:	DNA Stain
Pathway:	Cell Cycle/DNA Damage
Storage:	-20°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 (312.30 mM; Need ultrasonic)				
	Preparing Stock Solutions	Solvent	1 mg	5 mg	10 mg
		Concentration			
		1 mM	3.1230 mL	15.6148 mL	31.2295 mL
		5 mM	0.6246 mL	3.1230 mL	6.2459 mL
10 mM	0.3123 mL	1.5615 mL	3.1230 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: 5.5 mg/mL (17.18 mM); Suspended solution; Need ultrasonic				

BIOLOGICAL ACTIVITY

Description	DFHBI-1T is a membrane-permeable RNA aptamers-activated fluorescence probe (ex/em=472 nm/507 nm). DFHBI-1T binds to RNA aptamers (Spinach, Spinach2, iSpinach, and Broccoli) and causes specific fluorescence and lower background fluorescence. DFHBI-1T is used to image RNA in live cells ^{[1][2]} .
In Vitro	DFHBI-1T (20 μM; for 10 min) increases fluorescence in COS7 cells expressing (CGG) ₆₀ -Spinach2 over DFHBI (20 μM) ^[1] . Broccoli-DFHBI-1T has ex/em=472 nm/507 nm and Spinach2-DFHBI-1T has ex/em=482 nm/505 nm ^[2] . MCE has not independently confirmed the accuracy of these methods. They are for reference only.

CUSTOMER VALIDATION

- Anal Chem. 2023 Sep 3.

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- Anal Chim Acta. 2022 May 29;1209:339816.
 - Talanta. 2024 Mar 1, 269, 125465.
 - Talanta. 2023 Feb 14;257:124373.
 - J Cell Biochem. 2022 Apr 11.

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REFERENCES

[1]. Wenjiao Song, et al. Plug-and-play fluorophores extend the spectral properties of Spinach. J Am Chem Soc. 2014 Jan 29;136(4):1198-201.

[2]. Grigory S Filonov, et al. Broccoli: rapid selection of an RNA mimic of green fluorescent protein by fluorescence-based selection and directed evolution. J Am Chem Soc. 2014 Nov 19;136(46):16299-308.

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

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