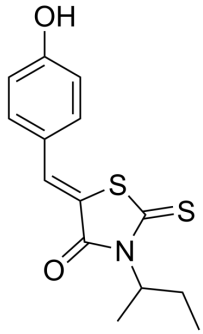
PFM03

Cat. No.:	HY-148078
CAS No.:	1558598-48-3
Molecular Formula:	$C_{14}H_{15}NO_2S_2$
Molecular Weight:	293.4
Target:	Endonuclease
Pathway:	Cell Cycle/DNA Damage
Storage:	Powder -20°C 3 years 4°C 2 years In solvent -80°C 6 months -20°C 1 month



SOLVENT & SOLUBILITY

In Vitro

DMSO : 100 mg/mL (340.83 mM; Need ultrasonic)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	3.4083 mL	17.0416 mL	34.0832 mL
	5 mM	0.6817 mL	3.4083 mL	6.8166 mL
	10 mM	0.3408 mL	1.7042 mL	3.4083 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 (8.52 mM); Clear solution; Need ultrasonic
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: 2.5 mg/mL (8.52 mM); Clear solution; Need ultrasonic

BIOLOGICAL ACTIVITY

Description

PFM03 is a MRE11 Endonuclease inhibitor. PFM03 regulates DNA double-strand break repair (DSBR) by nonhomologous end-joining (NHEJ)[1].

In Vitro

PFM03 (50-400 μM; 30 min) specifically inhibits MRE11 endonuclease activity[1].
PFM03 (100 μM; 30 min) causes normal DSB repair in G2 ($CENPF^+$) cells[1].
PFM03 (50 μM; 8 h) enhances NHEJ usage but reduces homologous recombination (HR) in cells[1].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

[1]. Shibata A, et al. DNA double-strand break repair pathway choice is directed by distinct MRE11 nuclease activities. Mol Cell. 2014 Jan 9;53(1):7-18.

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