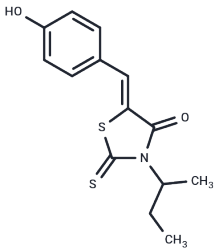
Data Sheet (Cat.No.T60621)

PFM03

Chemical Properties



CAS No. : 1558598-48-3

Formula: C14H15NO2S2

Molecular Weight: 293.4

Storage: Store at low temperature
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	PFM03 is an endonuclease inhibitor that specifically blocks Mre11 and is also able to reduce MRN endonuclease activity by 98%, blocking hMRN-mediated endonucleotomy and nuclear exocytosis processes on the protein-binding end of the 5 ' and 3 ' chains.
Targets(IC50)	Endonuclease
In vitro	Treatment with 50-400 μM PFM03 for 30 minutes specifically inhibits the endonuclease activity of MRE11 [1]. Treatment with 100 μM PFM03 for 30 minutes does not impair double-strand break (DSB) repair in G2-phase ($CENPF^+$) cells [1]. Treatment with 50 μM PFM03 for 8 hours increases non-homologous end joining (NHEJ) activity while suppressing homologous recombination (HR) in cells [1].

Solubility Information

Solubility	DMSO: 80 mg/mL (272.67 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 (11.25 mM),Sonication is recommended. *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.*

Preparing Stock Solutions

	1mg	5mg	10mg
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
50 mM	0.0682 mL	0.3408 mL	0.6817 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

Shibata A, Moiani D, Arvai AS, Perry J, Harding SM, Genois MM, Maity R, van Rossum-Fikkert S, Kertokalio A, Romoli F, Ismail A, Ismalaj E, Petricci E, Neale MJ, Bristow RG, Masson JY, Wyman C, Jeggo PA, Tainer JA. DNA double-strand break repair pathway choice is directed by distinct MRE11 nuclease activities. Mol Cell. 2014 Jan 9;53(1):7-18.