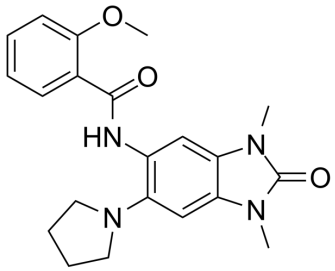
PFI-4

Cat. No.:	HY-18664
CAS No.:	900305-37-5
Molecular Formula:	$C_{21}H_{24}N_4O_3$
Molecular Weight:	380.44
Target:	Epigenetic Reader Domain
Pathway:	Epigenetics
Storage:	Powder -20°C 3 years 4°C 2 years In solvent -80°C 2 years -20°C 1 year



SOLVENT & SOLUBILITY

In Vitro

DMSO : 26 mg/mL (68.34 mM; Need ultrasonic and warming)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	2.6285 mL	13.1427 mL	26.2854 mL
	5 mM	0.5257 mL	2.6285 mL	5.2571 mL
	10 mM	0.2629 mL	1.3143 mL	2.6285 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: ≥ 1 mg/mL (2.63 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 1 mg/mL (2.63 mM); Clear solution
3. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 1 mg/mL (2.63 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

PFI-4 (compound 11) is a potent and highly selective BRPF1 Bromodomain (BRPF1B) inhibitor, with an IC_{50} of 172 nM. PFI-4 can be used to explore the functional mechanisms of the HBO1/BRPF1 complex and to study bone loss and osteolytic malignant bone lesions[1][2].

IC_{50} & Target

IC50: 3.517 μM (BRPF2), >10 μM (BRD4 (1)), 0.172 μM (BRPF1B), >10 μM (TRIM24)[1].

In Vitro

PFI-4 (1.25 μM; 7 or 11 days) inhibits differentiation of human osteoclasts[1].

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

Cell Viability Assay[1]

Cell Line:	Osteoclasts
Concentration:	1.25 μM
Incubation Time:	7 or 11 days
Result:	Significantly reduces MMP9 secretion in osteoclasts.

CUSTOMER VALIDATION

- Mol Carcinog. 2023 May 5.

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REFERENCES

[1]. Meier JC, et al. Selective Targeting of Bromodomains of the Bromodomain-PHD Fingers Family Impairs Osteoclast Differentiation. ACS Chem Biol. 2017 Oct 20;12(10):2619-2630.

[2]. Demont EH, et al. 1,3-Dimethyl Benzimidazolones Are Potent, Selective Inhibitors of the BRPF1 Bromodomain. (2014) ACS Med Chem Lett. 5(11):1190-1195.

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