SMI-4a

Cat. No.: HY-16576A

CAS No.: 438190-29-5

Molecular Formula: $C_{11}H_6F_3NO_2S$

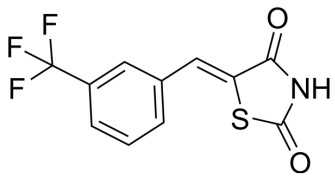
Molecular Weight: 273.23

Target: Pim

Pathway: JAK/STAT Signaling

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 (365.99 mM)

* "≥" means soluble, but saturation unknown.

Preparing Stock Solutions

Solvent / Mass / Concentration	1 mg	5 mg	10 mg
1 mM	3.6599 mL	18.2996 mL	36.5992 mL
5 mM	0.7320 mL	3.6599 mL	7.3198 mL
10 mM	0.3660 mL	1.8300 mL	3.6599 mL

Please refer to the solubility information to select the appropriate solvent.

BIOLOGICAL ACTIVITY

Description

SMI-4a (TCS-PIM-1-4a) is a poten, selective, cell-permeable and ATP-competitive Pim-1 inhibitor with an IC_{50} of 24 μM and a K_i of 0.6 μM. SMI-4a also inhibits Pim-2 (IC_{50} of 100 μM), and does not significantly inhibit the other serine/threonine- or tyrosine-kinases. SMI-4a has anticancer activity[1].

IC_{50} & Target

PIM1	PIM1	PIM2
24 μM (IC_{50})	0.6 μM (Ki)	100 μM (IC_{50})

In Vitro

SMI-4a (0.5 μM; 1 hour; HEK-293T cells) treatment attenuates the autophosphorylation of tagged Pim-1 in intact cells[1].

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

Western Blot Analysis[1]

Cell Line:	HEK-293T cells
Concentration:	0.5 μM

Incubation Time:	1 hour
Result:	Caused a dose-dependent reduction in Pim-1-induced 4E-BP1 phosphorylation, with an IC_{50} of approximately 125 nM.

REFERENCES

[1]. Xia Z, et al. Synthesis and evaluation of novel inhibitors of Pim-1 and Pim-2 protein kinases. J Med Chem. 2009 Jan 8;52(1):74-86.

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