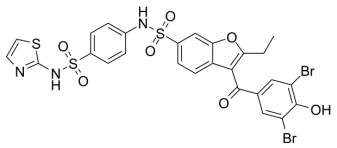
PTP1B-IN-4

Cat. No.:	HY-15756
CAS No.:	765317-72-4
Molecular Formula:	$C_{26}H_{19}Br_2N_3O_7S_3$
Molecular Weight:	741.45
Target:	Phosphatase
Pathway:	Metabolic Enzyme/Protease
Storage:	Powder -20°C 3 years In solvent -80°C 6 months -20°C 1 month



SOLVENT & SOLUBILITY

In Vitro

DMSO : 100 mg/mL (134.87 mM; Need ultrasonic)

Preparing Stock Solutions	Mass / Solvent / Concentration	1 mg	5 mg	10 mg
	1 mM	1.3487 mL	6.7435 mL	13.4871 mL
	5 mM	0.2697 mL	1.3487 mL	2.6974 mL
	10 mM	0.1349 mL	0.6744 mL	1.3487 mL

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

In Vivo

1. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.08 mg/mL (2.81 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

PTP1B-IN-4 is a non-competitive allosteric inhibitor of the protein tyrosine phosphatase PTP1B, with an IC_{50} of 8 μM. PTP1B-IN-4 is potentail for the research of obesity and diabetes[1][2].

IC_{50} & Target

IC50: 8 μM (PTP1B)[1]

In Vitro

PTP1B-IN-4 (250 μM; 1 hour) stimulates insulin receptor (IR) phosphorylation in CHO cells overexpressing human IR[1].
?PTP1B-IN-4 also induces phosphorylation of IRS-1 and Akt, proteins downstream of the insulin receptor[1].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Western Blot Analysis[1]

Cell Line:	CHO cells
Concentration:	250 μM

Incubation Time:	1 hour
Result:	Stimulated insulin receptor phosphorylation.

REFERENCES

[1]. Wiesmann, C., et al. Allosteric inhibition of protein tyrosine phosphatase 1B. Nature Structural & Molecular Biology, 2004. 11(8), 730–737.

[2]. Jin, T., et al. Selective binding modes and allosteric inhibitory effects of lupane triterpenes on protein tyrosine phosphatase 1B. Scientific Reports, 2016. 6(1).

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