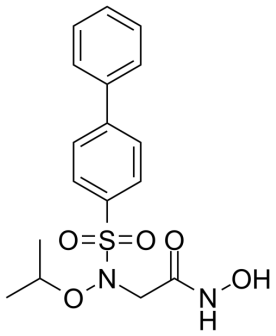
ARP-100

Cat. No.:	HY-103444
CAS No.:	704888-90-4
Molecular Formula:	$C_{17}H_{20}N_2O_5S$
Molecular Weight:	364.42
Target:	MMP
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 (274.41 mM; Need ultrasonic)

Preparing Stock Solutions	Mass / Solvent / Concentration	1 mg	5 mg	10 mg
	1 mM	2.7441 mL	13.7204 mL	27.4409 mL
	5 mM	0.5488 mL	2.7441 mL	5.4882 mL
	10 mM	0.2744 mL	1.3720 mL	2.7441 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 (6.86 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: 2.5 mg/mL (6.86 mM); Suspended solution; Need ultrasonic
3. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.5 mg/mL (6.86 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

ARP-100 is a potent and selective matrix metalloproteinase MMP-2 inhibitor (IC_{50}=12 nM). ARP-100 interacts with S1′ pocket of MMP-2 and shows anti-invasive properties in an in vitro model of invasion on matrigel. ARP-100 shows the less inhibitory activity towards MMP-1 (>50 μM), MMP-3 (4.5 μM), MMP-7 (>50 μM), and MMP-9 (0.2 μM)[1][2].

IC_{50} & Target

MMP-2 12 nM (IC_{50})	MMP-9 0.2 μM (IC_{50})	MMP-3 4.5 μM (IC_{50})	MMP-1 >50 μM (IC_{50})
MMP-7 >50 μM (IC_{50})			

In Vitro	ARP-100 (50 nM) shows a significant reduction in the total number of invasive elongations[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

[1]. Rossello A, et al. New N-arylsulfonyl-N-alkoxyaminoacetohydroxamic acids as selective inhibitors of gelatinase A (MMP-2). Bioorg Med Chem. 2004 May 1;12(9):2441-50.

[2]. Tuccinardi T, et al. Amber force field implementation, molecular modelling study, synthesis and MMP-1/MMP-2 inhibition profile of (R)- and (S)-N-hydroxy-2-(N-isopropoxybiphenyl-4-ylsulfonamido)-3-methylbutanamides. Bioorg Med Chem. 2006 Jun 15;14(12):4260-76.

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