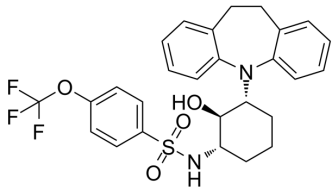
SMAP-2

Cat. No.:	HY-120272
CAS No.:	1809068-70-9
Molecular Formula:	$C_{27}H_{27}F_3N_2O_4S$
Molecular Weight:	532.57
Target:	Phosphatase
Pathway:	Metabolic Enzyme/Protease
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 : 300 mg/mL (563.31 mM; Need ultrasonic)

Preparing Stock Solutions	Mass / Solvent / Concentration	1 mg	5 mg	10 mg
	1 mM	1.8777 mL	9.3884 mL	18.7769 mL
	5 mM	0.3755 mL	1.8777 mL	3.7554 mL
	10 mM	0.1878 mL	0.9388 mL	1.8777 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: ≥ 7.5 mg/mL (14.08 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 7.5 mg/mL (14.08 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

SMAP-2 (DT-1154) is an orally active protein phosphatase 2A (PP2A) activator, with anti-cancer activity[1][2].

IC_{50} & Target

PP2A[1]

In Vitro

SMAP-2 reduces cell viability of pancreatic ductal adenocarcinoma (PDA) cell lines in a dose-dependent manner[2].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

In Vivo

SMAP-2 significantly reduces abdominal aortic aneurysms (AAA) incidence and aortic dilation in pro-AAA apolipoprotein E-null (ApoE-/-) mice[2].
SMAP-2 (15 mg/kg; i.g.; daily; 6 days a week; for approximately 14 days) has anti-tumor activity in pancreatic cancer mice

model[2].

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

Animal Model:	NSG mice, with PANC89 cells xenograft[2]
Dosage:	15 mg/kg
Administration:	Oral gavage, daily, 6 days a week, for approximately 14 days
Result:	Decreased tumor growth and tumor weight.

REFERENCES

[1]. Chao Zhang, et al. Abstract 13927: Allosteric Activation of PP2A Inhibits Experimental Abdominal Aortic Aneurysm. 2018. Circulation. 2016;134:A13927.

[2]. Brittany L Allen-Petersen, et al. Activation of PP2A and Inhibition of mTOR Synergistically Reduce MYC Signaling and Decrease Tumor Growth in Pancreatic Ductal Adenocarcinoma. Cancer Res. 2019 Jan 1;79(1):209-219.

Caution: Product has not been fully validated for medical applications. For research use only.

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