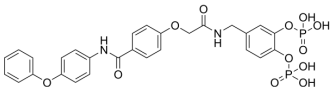
Stafib-2

Cat. No.:	HY-112648
CAS No.:	2097938-74-2
Molecular Formula:	$C_{28}H_{26}N_2O_{12}P_2$
Molecular Weight:	644.46
Target:	STAT
Pathway:	JAK/STAT Signaling; Stem Cell/Wnt
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 : 50 mg/mL (77.58 mM; Need ultrasonic)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	1.5517 mL	7.7584 mL	15.5169 mL
	5 mM	0.3103 mL	1.5517 mL	3.1034 mL
	10 mM	0.1552 mL	0.7758 mL	1.5517 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 (3.88 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 2.5 mg/mL (3.88 mM); Clear solution
3. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.5 mg/mL (3.88 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Stafib-2 is a potent and selctive inhibitor of the transcription factor STAT5b, with an IC_{50} of 82 nM and 1.7 μM for STAT5b and STAT5a, respectively. Stafib-2 exhibits poor cell permeability[1].

IC_{50} & Target

IC50: 82 nM (STAT5b)[1]

In Vitro

Stafib-2 has an extremely high affinity for STAT5b (K_i=8.8 nM)[1].
Stafib-2 (3-10 μM; 4-48 h) does not show significant activity in K562 and MDA-MB-231 cells[1].

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

REFERENCES

[1]. Elumalai N, et, al. Rational development of Stafib-2: a selective, nanomolar inhibitor of the transcription factor STAT5b. Sci Rep. 2017 Apr 11;7(1):819.

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