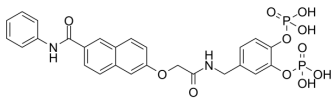
Stafib-1

Cat. No.:	HY-112647
CAS No.:	1688703-26-5
Molecular Formula:	$C_{26}H_{24}N_2O_{11}P_2$
Molecular Weight:	602.42
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 : 100 mg/mL (166.00 mM; Need ultrasonic)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	1.6600 mL	8.2999 mL	16.5997 mL
	5 mM	0.3320 mL	1.6600 mL	3.3199 mL
	10 mM	0.1660 mL	0.8300 mL	1.6600 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 (4.15 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 2.5 mg/mL (4.15 mM); Clear solution
3. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.5 mg/mL (4.15 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Stafib-1 is the first selective inhibitor of the STAT5b SH2 domain, with a K_i of 44 nM and an IC_{50} of 154 nM[1].

IC_{50} & Target

STAT5b
154 nM (IC_{50})

In Vitro

Stafib-1 is the first small molecule which inhibits the STAT5b SH2 domain with more than 50-fold selectivity over STAT5a[1].

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

REFERENCES

[1]. Nagarajan Elumalai, 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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