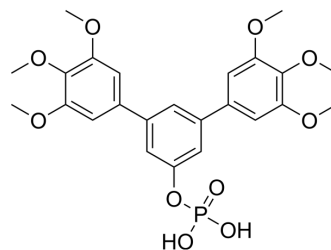


Stafia-1

Cat. No.:	HY-136546		
CAS No.:	2582757-90-0		
Molecular Formula:	C ₂₄ H ₂₇ O ₁₀ P		
Molecular Weight:	506.44		
Target:	STAT		
Pathway:	JAK/STAT Signaling; Stem Cell/Wnt		
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 : 250 mg/mL (493.64 mM; Need ultrasonic)					
		Solvent Concentration	Mass	1 mg	5 mg	10 mg
	Preparing Stock Solutions	1 mM		1.9746 mL	9.8728 mL	19.7457 mL
		5 mM		0.3949 mL	1.9746 mL	3.9491 mL
10 mM			0.1975 mL	0.9873 mL	1.9746 mL	
Please refer to the solubility information to select the appropriate solvent.						
In Vivo	<ol style="list-style-type: none"> Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline Solubility: ≥ 2.08 mg/mL (4.11 mM); Clear solution Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline) Solubility: ≥ 2.08 mg/mL (4.11 mM); Clear solution Add each solvent one by one: 10% DMSO >> 90% corn oil Solubility: ≥ 2.08 mg/mL (4.11 mM); Clear solution 					

BIOLOGICAL ACTIVITY

Description	Stafia-1 is a potent STAT5a inhibitor (K _i =10.9 μM, IC ₅₀ =22.2 μM). Stafia-1 displays high selectivity over STAT5b and other STAT family members ^[1] .	
IC₅₀ & Target	STAT5a 10.9 μM (K _i)	STAT5a 22.2 μM (IC ₅₀)
In Vitro	Stafia-1 shows at least 9-fold selectivity over STAT5b and higher selectivity against other STAT family members ^[1] .	

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

REFERENCES

[1]. Natarajan K, et al. Stafia-1: a STAT5a-Selective Inhibitor Developed via Docking-Based Screening of in Silico O-Phosphorylated Fragments. *Chemistry*. 2020;26(1):148-154.

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

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