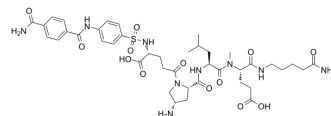


TP0597850

Cat. No.:	HY-148571
CAS No.:	2642181-22-2
Molecular Formula:	C ₄₁ H ₅₇ N ₉ O ₁₃ S
Molecular Weight:	916.01
Target:	MMP
Pathway:	Metabolic Enzyme/Protease
Storage:	-20°C, protect from light, stored under nitrogen * In solvent : -80°C, 6 months; -20°C, 1 month (protect from light, stored under nitrogen)



SOLVENT & SOLUBILITY

In Vitro	DMSO : 100 mg/mL (109.17 mM; Need ultrasonic)				
	Preparing Stock Solutions	Solvent Concentration	Mass	1 mg	
				5 mg	
				10 mg	
				10 mg	
			1 mg	5 mg	10 mg
	1 mM		1.0917 mL	5.4585 mL	10.9169 mL
	5 mM		0.2183 mL	1.0917 mL	2.1834 mL
	10 mM		0.1092 mL	0.5458 mL	1.0917 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 (2.73 mM); Clear solution				
	2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline) Solubility: ≥ 2.5 mg/mL (2.73 mM); Clear solution				
	3. Add each solvent one by one: 10% DMSO >> 90% corn oil Solubility: ≥ 2.5 mg/mL (2.73 mM); Clear solution				

BIOLOGICAL ACTIVITY

Description	TP0597850 is a selective inhibitor of MMP2 (IC ₅₀ =0.22 nM). TP0597850 has a long MMP2 dissociation half-life (t _{1/2} =265 min) ^[1] .		
IC ₅₀ & Target	MMP2 0.22 nM (IC ₅₀)	MMP-12 250 nM (IC ₅₀)	MMP13 240 nM (IC ₅₀)
In Vitro	TP0597850 (compound 18) exhibits extremely high chemical stability under a wide range of pH conditions ^[1] . TP0597850 shows an inhibition constant against MMP2 with a K _i value of 0.034 nM ^[1] .		

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

REFERENCES

[1]. Takeuchi T, et al. Discovery of TP0597850: A Selective, Chemically Stable, and Slow Tight-Binding Matrix Metalloproteinase-2 Inhibitor with a Phenylbenzamide-Pentapeptide Hybrid Scaffold. J Med Chem. 2023 Jan 12;66(1):822-836.

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

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