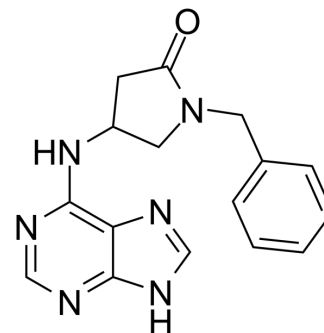


(Rac)-Benpyrine

Cat. No.:	HY-133807A
CAS No.:	1333714-43-4
Molecular Formula:	C ₁₆ H ₁₆ N ₆ O
Molecular Weight:	308.34
Target:	TNF Receptor
Pathway:	Apoptosis
Storage:	4°C, protect from light * In solvent : -80°C, 6 months; -20°C, 1 month (protect from light)



SOLVENT & SOLUBILITY

In Vitro	DMSO : 10 mg/mL (32.43 mM; ultrasonic and warming and heat to 60°C)					
		Solvent Concentration	Mass	1 mg	5 mg	10 mg
	Preparing Stock Solutions	1 mM	3.2432 mL	16.2159 mL	32.4317 mL	
		5 mM	0.6486 mL	3.2432 mL	6.4863 mL	
		10 mM	0.3243 mL	1.6216 mL	3.2432 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: ≥ 1.25 mg/mL (4.05 mM); Clear solution					
	2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline) Solubility: ≥ 1.25 mg/mL (4.05 mM); Clear solution					
	3. Add each solvent one by one: 10% DMSO >> 90% corn oil Solubility: ≥ 1.25 mg/mL (4.05 mM); Clear solution					

BIOLOGICAL ACTIVITY

Description	(Rac)-Benpyrine, a racemate of Benpyrine, is a potent and orally active TNF-α inhibitor. (Rac)-Benpyrine has the potential for TNF-α mediated inflammatory and autoimmune disease research ^[1] .
In Vitro	(Rac)-Benpyrine (Compound 001; 5-10 μM; 24 hours) treatment inhibits the expression level of TNF-α downstream pathway protein NF-κB in the nucleus in RAW264.7 macrophages ^[1] . MCE has not independently confirmed the accuracy of these methods. They are for reference only.
In Vivo	(Rac)-Benpyrine (Compound 001; 25-50 mg/kg; oral gavage; daily; for 3 weeks; Kunming mice) treatment obviously reduces the inflammatory cytokines IFN-γ, IL-1β and IL-6 in the blood serum, and the anti-inflammatory factor IL-10 is obviously

increased, the foot swelling degree of the arthritis part is also obviously slowed down, and the weight index increase caused by the arthritis also has no obvious reduction^[1].

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

Animal Model:	Kunming mice (7-8 weeks) treated with bovine type II collagen and a CFA complete adjuvant ^[1]
Dosage:	25 mg/kg, 50 mg/kg
Administration:	Oral gavage; daily; for 3 weeks
Result:	The inflammatory cytokines IFN- γ , IL-1 β and IL-6 in the blood serum were obviously reduced, and the anti-inflammatory factor IL-10 was obviously increased.

REFERENCES

[1]. Hua Li, et al. Compound with TNF- α inhibitory activity and application. CN111320630A.

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

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