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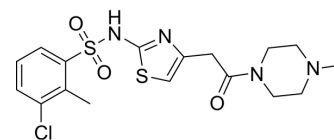
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BVT 2733

Cat. No.:	HY-18054		
CAS No.:	376640-41-4		
Molecular Formula:	C ₁₇ H ₂₁ ClN ₄ O ₃ S ₂		
Molecular Weight:	428.96		
Target:	11β-HSD		
Pathway:	Metabolic Enzyme/Protease		
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 : 50 mg/mL (116.56 mM; Need ultrasonic)				
		Solvent Concentration	Mass 1 mg	5 mg	10 mg
	Preparing Stock Solutions	1 mM	2.3312 mL	11.6561 mL	23.3122 mL
		5 mM	0.4662 mL	2.3312 mL	4.6624 mL
10 mM		0.2331 mL	1.1656 mL	2.3312 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: ≥ 2.5 mg/mL (5.83 mM); Clear solution Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline) Solubility: ≥ 2.5 mg/mL (5.83 mM); Clear solution Add each solvent one by one: 10% DMSO >> 90% corn oil Solubility: ≥ 2.5 mg/mL (5.83 mM); Clear solution 				

BIOLOGICAL ACTIVITY

Description	BVT 2733 is a potent, selective, and orally active non-steroidal 11β-hydroxydehydrogenase 1 (11β-HSD1) inhibitor. BVT 2733 is potently against the mouse enzyme (IC ₅₀ =96 nM) over the human enzyme (IC ₅₀ =3341 nM). BVT 2733 has the potential for the study of arthritis and obesity related disease ^[1] .
IC₅₀ & Target	IC ₅₀ : 96 nM (mouse 11β-HSD1) IC ₅₀ : 3341 nM (human 11β-HSD1) ^[1]

In Vitro	<p>BVT 2733 (100 μM; 24 hours) co-treatment with PA (100 μM) reduces MCP-1 expression in fully differentiation adipocytes^[3]. BVT 2733 (50-100 μM; 24 hours) reduces the inflammation protein levels (MCP-1, IL-6) in medium?in J774.1 macrophages by Elisa^[3]. MCE has not independently confirmed the accuracy of these methods. They are for reference only. RT-PCR^[3]</p>	
	Cell Line:	Differentiation adipocytes
	Concentration:	100 μ M
	Incubation Time:	24 hours
	Result:	Down-regulated MCP-1 mRNA level.
In Vivo	<p>BVT-2733 (oral administration; 100 mg/kg; twice daily; 2 weeks) attenuates the arthritis severity and anti-CII level and decreases the levels of serum TNF-α, IL-1β, IL-6 and IL-17 in CIA mice^[2]. BVT 2733 (oral administration; 100 mg/kg; dosed (09.00 and 17.00 h); last 4 weeks) exhibits decreased body weight and enhanced glucose tolerance and insulin sensitivity when it compares to control mice. It also down-regulated the expression of inflammation-related genes including monocyte chemoattractant protein 1 (MCP-1), tumor necrosis factor alpha (TNF-α) and the number of infiltrated macrophages within the adipose tissue in vivo^[3]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.</p>	
	Animal Model:	Collagen-induced arthritis (CIA) mice ^[2]
	Dosage:	100 mg/kg
	Administration:	Oral administration; twice daily; 2 weeks
	Result:	Reduced synovial inflammation and joint destruction.
	Animal Model:	C57BL/6J mice ^[3]
	Dosage:	100 mg/kg
	Administration:	Oral administration; dosed (09.00 and 17.00 h); last 4 weeks
	Result:	Improved metabolic homeostasis and suppressed the inflammation of adipose tissue in diet-induced obese mice.

CUSTOMER VALIDATION

- Acta Pharm Sin B. 15 January 2022.
- Int J Biol Sci. 2022 Apr 30;18(8):3107-3121.
- Mol Med Rep. 2020 Oct;22(4):3191-3200.

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REFERENCES

[1]. Zhang L, et al. 11 β -Hydroxysteroid dehydrogenase 1 inhibition attenuates collagen-induced arthritis. Int Immunopharmacol. 2013 Nov;17(3):489-94.

[2]. Wang L, et al. BVT.2733, a selective 11 β -hydroxysteroid dehydrogenase type 1 inhibitor, attenuates obesity and inflammation in diet-induced obese mice. PLoS One. 2012;7(7):e40056.

[3]. 11 β -hydroxydehydrogenase 1 (11 β -HSD1) Inhibitor in Development

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

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