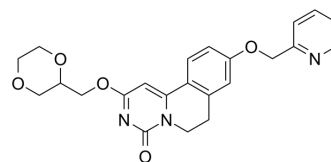


GPR84 antagonist 8

Cat. No.:	HY-112562		
CAS No.:	1445846-30-9		
Molecular Formula:	C ₂₃ H ₂₃ N ₃ O ₅		
Molecular Weight:	421.45		
Target:	GPR84		
Pathway:	GPCR/G Protein		
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 : 5 mg/mL (11.86 mM; Need ultrasonic)					
		Solvent Concentration	Mass	1 mg	5 mg	10 mg
	Preparing Stock Solutions	1 mM		2.3728 mL	11.8638 mL	23.7276 mL
		5 mM		0.4746 mL	2.3728 mL	4.7455 mL
		10 mM		0.2373 mL	1.1864 mL	2.3728 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: ≥ 0.54 mg/mL (1.28 mM); Clear solution Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline) Solubility: ≥ 0.54 mg/mL (1.28 mM); Clear solution Add each solvent one by one: 10% DMSO >> 90% corn oil Solubility: ≥ 0.54 mg/mL (1.28 mM); Clear solution 					

BIOLOGICAL ACTIVITY

Description	GPR84 antagonist 8 is a selective GPR84 antagonist.
IC₅₀ & Target	GPR84 ^[1]
In Vitro	GPR84 is a member of the metabolic G protein-coupled receptor family, and its expression has been described predominantly in immune cells. To test the hypothesis that blocking the activation of GPR84 can be a potential anti-inflammatory strategy in different inflammatory diseases, GPR84 antagonist 8 is used. The potency and specificity of GPR84

antagonist 8 is assessed using GPR84-CHO cells in the cAMP assay. GPR84 antagonist 8 effectively inhibits the action of 6-OAU in decreasing cAMP production in GPR84-CHO cells. To test GPR84 antagonist 8's inhibition of the pro-inflammatory effects of GPR84 activation in macrophages, LPS pre-treated BMDMs are incubated with 10 μ M GPR84 antagonist 8 for 30 min before adding 1 μ M 6-OAU. Protein analysis by Western Blot shows that the GPR84 antagonist 8 partially blocks the phosphorylation of AKT and ERK induced by 6-OAU^[1].

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

PROTOCOL

Cell Assay^[1]

Bone marrow-derived macrophages treated with either vehicle (0.3% DMSO) or 1 μ M 6-OAU for 1 h are incubated with unopsonised pHrodo E. coli bioparticles at 0.1 mg/mL in a 96-well flat clear bottom plate. For the inhibition studies with GPR84 antagonist 8, cells are pretreated with 10 μ M GPR84 antagonist 8 for 30 min before addition of either vehicle or 6-OAU. The plate is then placed into the IncuCyte Zoom platform which is housed inside a humidified incubator at 37°C, 5% CO₂. Two to four images per well from three technical replicates are taken every 15 min for 4 h^[1].

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

REFERENCES

[1]. Recio C, et al. Activation of the Immune-Metabolic Receptor GPR84 Enhances Inflammation and Phagocytosis in Macrophages. *Front Immunol.* 2018 Jun 20;9:1419.

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

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