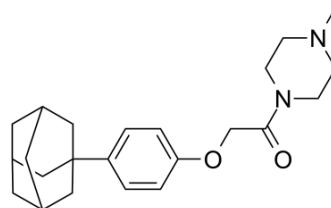


IDF-11774

Cat. No.:	HY-111387		
CAS No.:	1429054-28-3		
Molecular Formula:	C ₂₃ H ₃₂ N ₂ O ₂		
Molecular Weight:	368.51		
Target:	HIF/HIF Prolyl-Hydroxylase		
Pathway:	Metabolic Enzyme/Protease		
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 : 60 mg/mL (162.82 mM; Need ultrasonic and warming)				
		Solvent Concentration	Mass 1 mg	5 mg	10 mg
	Preparing Stock Solutions	1 mM	2.7136 mL	13.5682 mL	27.1363 mL
		5 mM	0.5427 mL	2.7136 mL	5.4273 mL
		10 mM	0.2714 mL	1.3568 mL	2.7136 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: ≥ 1.67 mg/mL (4.53 mM); Clear solution Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline) Solubility: ≥ 1.67 mg/mL (4.53 mM); Clear solution Add each solvent one by one: 10% DMSO >> 90% corn oil Solubility: ≥ 1.67 mg/mL (4.53 mM); Clear solution 				

BIOLOGICAL ACTIVITY

Description	IDF-11774 is a novel hypoxia-inducible factor α (HIFα)-1 inhibitor with an IC ₅₀ of 3.65 μM.
IC₅₀ & Target	IC ₅₀ : 3.65 μM (HIF-1α) ^[1]
In Vitro	IDF-11774 is a novel hypoxia-inducible factor (HIF)-1 inhibitor with an IC ₅₀ of 3.65 μM in cancer cell line. IDF-11774 has been approved as a clinical candidate for a phase I study. Human umbilical vascular endothelial cells (HUVECs) treated with IDF-11774 show reduced capillary network formation on Matrigel. IDF-11774 treatment leads to reduced mRNA expression of

GLUT1 and pyruvate dehydrogenase kinase 1 (PDK1). In addition, intracellular ATP levels are significantly reduced in the presence of IDF-11774 and are affected to a greater degree under low glucose conditions (5.5 mM)^[1].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

In Vivo

Luciferase activity and HIF-1 α accumulation are strongly suppressed in the tumors of mice treated by oral administration of IDF-11774, compare with the control. When IDF-11774 is orally administered daily for two weeks, significant dose-dependent tumor regression is observed in the mouse model^[1].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

PROTOCOL

Animal Administration ^[1]

Female Balb/c nude mice are used in this study. Cancer cells are injected subcutaneously into 4- to 6-week-old female Balb/c nude mice to generate tumors (5 mice per group). When the tumors grow to 100 mm³, IDF-11774 is administered orally (per oral) or intravenously for 15 days. Tumor volumes (V) are determined using the following equation: $V \text{ (mm}^3\text{)} = (\text{length} \times \text{width} \times \text{height}) \times 0.5$. Percentage tumor growth inhibition (%TGI) values are calculated for each treatment group versus the control^[1].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

[1]. Ban HS, et al. The novel hypoxia-inducible factor-1 α inhibitor IDF-11774 regulates cancer metabolism, thereby suppressing tumor growth. Cell Death Dis. 2017 Jun 1;8(6):e2843.

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

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