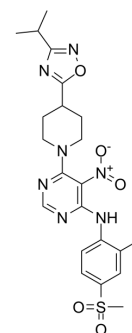


AR 231453

Cat. No.:	HY-15564		
CAS No.:	733750-99-7		
Molecular Formula:	C ₂₁ H ₂₄ FN ₇ O ₅ S		
Molecular Weight:	505.52		
Target:	GPR119		
Pathway:	GPCR/G Protein; Neuronal Signaling		
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 : 25 mg/mL (49.45 mM; Need ultrasonic)

Solvent	Mass	Concentration		
		1 mg	5 mg	10 mg
Preparing Stock Solutions	1 mM	1.9782 mL	9.8908 mL	19.7816 mL
	5 mM	0.3956 mL	1.9782 mL	3.9563 mL
	10 mM	0.1978 mL	0.9891 mL	1.9782 mL

Please refer to the solubility information to select the appropriate solvent.

BIOLOGICAL ACTIVITY

Description

AR 231453 is a potent, specific and orally available GPR119 agonist. AR 231453 can stimulate β -cell replication and improve islet graft function^{[1][2]}.

In Vitro

AR 231453 is inactive at all other GPCRs tested (more than 230, including all known pancreatic islet receptors), indicating that it is highly selective for GPR119^[1].
 AR 231453 potently stimulates cAMP accumulation (EC_{50} = 4.7 nM) with a maximal efficacy similar to that seen with forskolin. AR 231453 significantly enhances insulin release in HIT-T15 cells, with an EC_{50} of 3.5 nM^[1].
 AR 231453 also stimulates insulin release in isolated mouse islets at glucose concentrations ranging from 8-17 mM^[1].
 MCE has not independently confirmed the accuracy of these methods. They are for reference only.

In Vivo

AR231453 (20 mg/kg, orally) markedly improves oral glucose tolerance in a dose-dependent fashion, with efficacy similar to maximally effective doses of the sulfonylurea glyburide^[1].
 MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Animal Model:	Mice ^[1] .
Dosage:	20 mg/kg.
Administration:	Orally, once.
Result:	Improved glucose tolerance in mice.

CUSTOMER VALIDATION

- Nat Commun. 2022 Nov 17;13(1):7033.

See more customer validations on www.MedChemExpress.com

REFERENCES

- [1]. Chu ZL, et al. A role for beta-cell-expressed G protein-coupled receptor 119 in glycemic control by enhancing glucose-dependent insulin release. *Endocrinology*. 2007 Jun;148(6):2601-9.
- [2]. J Gao, et al. Stimulating β -cell replication and improving islet graft function by AR231453, A GPR119 agonist. *Transplant Proc*. 2011 Nov;43(9):3217-20.

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

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