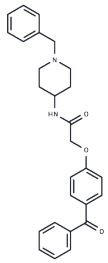
Data Sheet (Cat.No.T2257)

TargetMol

AdipoRon

Chemical Properties



CAS No. : 924416-43-3

Formula: C27H28N2O3

Molecular Weight: 428.52

Storage: Powder: -20°C for 3 years | In solvent: -80°C for 1 year
Actual storage temperature shall be subject to the COA.

Biological Description

Description	AdipoRon (SC-396658) is an orally bioavailable adiponectin receptor agonist. It can combine with AdipoR1/2 (KD: 1.8/3.1 μM).
Targets(IC50)	Adiponectin Receptor
In vitro	In wild-type mice, AdipoRon administered orally (50 mg/kg) activates the AdipoR2-PPAR-α pathway in the liver or the AdipoR1-AMPK-PGC-1α pathway in skeletal muscle, thereby improving insulin resistance, lipid abnormalities, and glucose tolerance. In the skeletal muscle and liver of WT mice, AdipoRon (50 mg/kg, intravenously) significantly induces phosphorylation of AMPK via AdipoR1/2. Furthermore, AdipoRon ameliorates diabetic symptoms in the genetic obesity murine model db/db mice and extends the shortened lifespan of db/db mice on a high-fat diet.
In vivo	AdipoRon, through its interaction with AdipoR1/2 in C2C12 myotubes, enhances the activation of AMPK and promotes the expression of PGC-1α as well as mitochondrial biogenesis.
Cell Research	The effects of AdipoRon on the proliferation of parenchymal and non-parenchymal hepatocytes are evaluated in vitro via L02 and RAW264.7, by MTT assay as described with slight modification: 100 μL cells suspension (6×104/mL) are seeded in a 96-well plate and incubated for 18 h. Fresh media with AdipoRon are added at specified concentrations, and the incubations continue for a further 24 h. Then cells are incubated for 4 h with 0.5 mg/mL of MTT, and analyzed in a microplate reader at 490 nm. Each group is performed in six replications. The mean absorbance values corrected for a blank (medium only) are calculated as percentages of survival.

Solubility Information

Solubility	H2O: < 1 mg/mL (insoluble or slightly soluble), Ethanol: 50 mg/mL (116.68 mM),Sonication is recommended. DMSO: 100 mg/mL (233.36 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+40% PEG300+5% Tween 80+45% Saline: 4 mg/mL (9.33 mM),Sonication is recommended. *Please add the solvents sequentially, clarifying the solution as much as possible before adding the next one. Dissolve by heating and/or sonication if necessary. Working solution is recommended to be prepared and*

In vivo Formulation	*used immediately. The formulation provided above is for reference purposes only. In vivo formulations may vary and should be modified based on specific experimental conditions.*

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.3336 mL	11.6681 mL	23.3361 mL
5 mM	0.4667 mL	2.3336 mL	4.6672 mL
10 mM	0.2334 mL	1.1668 mL	2.3336 mL
50 mM	0.0467 mL	0.2334 mL	0.4667 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

Reference

Okada-Iwabu M, et al. Nature. 2013, 503(7477), 493-499.
He Z, Liu S, Li Z, et al. Coaxial TP/APR electrospun nanofibers for programmed controlling inflammation and promoting bone regeneration in periodontitis-related alveolar bone defect models. Materials Today Bio. 2022: 100438.
Yang J, Wang Z X, Fang L, et al. Atractylodes lancea and Magnolia officinalis combination protects against high fructose-impaired insulin signaling in glomerular podocytes through upregulating Sirt1 to inhibit p53-driven miR-221. Journal of Ethnopharmacology. 2023, 300: 115688.