

AC1903

## Chemical Properties

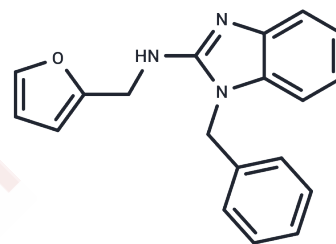
CAS No. : 831234-13-0

Formula: C<sub>19</sub>H<sub>17</sub>N<sub>3</sub>O

Molecular Weight: 303.36

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	AC1903 is a specific inhibitor of TRPC5 channel, and has been shown to suppress severe proteinuria and prevent podocyte loss.
Targets(IC50)	TRP/TRPV Channel
In vivo	AC1903, that specifically blocks TRPC5 channel activity in glomeruli of proteinuric rats.? Chronic administration of AC1903 suppressed severe proteinuria and prevented podocyte loss in a transgenic rat model of FSGS.AC1903 also provided therapeutic benefit in a rat model of hypertensive proteinuric kidney disease.?TRPC5 activity drives disease and that TRPC5 inhibitors may be valuable for the treatment of progressive kidney diseases[1].
Animal Research	Twice-daily intraperitoneal injections of AC1903 (50 mg/kg) for 7 days suppressed severe proteinuria in AT1R Tg rats (Advanced)[1]

## Solubility Information

Solubility	DMSO: 32.5 mg/mL (107.13 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: 2 mg/mL (6.59 mM),Sonication is recommended. <i>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 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.</i>

### Preparing Stock Solutions

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	1mg	5mg	10mg
1 mM	3.2964 mL	16.4821 mL	32.9641 mL
5 mM	0.6593 mL	3.2964 mL	6.5928 mL
10 mM	0.3296 mL	1.6482 mL	3.2964 mL
50 mM	0.0659 mL	0.3296 mL	0.6593 mL

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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

Yiming Zhou, et al. A small-molecule inhibitor of TRPC5 ion channels suppresses progressive kidney disease in animal models. *Science*

Sharma S H , Pablo J L , Montesinos M S , et al. Design, synthesis and characterization of novel N-heterocyclic-1-benzyl-1H-benzo[d]imidazole-2-amines as selective TRPC5 inhibitors leading to the identification of the selective compound, AC1903]]. *Bioorganic & Medicinal Chemistry Letters*, 2018.

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