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Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

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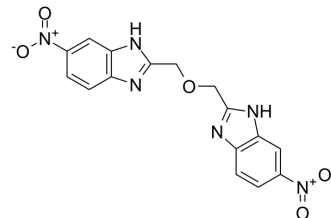
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VU591

Cat. No.:	HY-108585A
CAS No.:	1222810-74-3
Molecular Formula:	C ₁₆ H ₁₂ N ₆ O ₅
Molecular Weight:	368.3
Target:	Potassium Channel
Pathway:	Membrane Transporter/Ion Channel
Storage:	4°C, protect from light * In solvent : -80°C, 6 months; -20°C, 1 month (protect from light)



SOLVENT & SOLUBILITY

In Vitro	DMSO : 62.5 mg/mL (169.70 mM; Need ultrasonic)				
	Preparing Stock Solutions	Solvent Concentration	Mass		
			1 mg	5 mg	10 mg
		1 mM	2.7152 mL	13.5759 mL	27.1518 mL
		5 mM	0.5430 mL	2.7152 mL	5.4304 mL
	10 mM	0.2715 mL	1.3576 mL	2.7152 mL	
Please refer to the solubility information to select the appropriate solvent.					
In Vivo	1. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline				
	Solubility: ≥ 2.08 mg/mL (5.65 mM); Clear solution				

BIOLOGICAL ACTIVITY

Description	VU591 is a potent, selective renal outer medullary potassium channel (ROMK or Kir1.1) inhibitor, with an IC ₅₀ of 0.24 μM. VU591 can be used for neurological research with HY-108585 (the equivalent of VU591 hydrochloride) ^[1] .
IC ₅₀ & Target	IC ₅₀ : 0.24 μM (ROMK) ^[1] .
In Vitro	VU591 is a selective ROMK inhibitor and a ROMK channel pore blocker. VU591 can bind serum protein and has high metabolic stability ^[1] . MCE has not independently confirmed the accuracy of these methods. They are for reference only.
In Vivo	VU591 (i.c.v.; 1.842 μg) significantly decreases the immobile time in TST ^[2] . MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Animal Model:	Male ICR mice ^[2]
Dosage:	1.842 µg
Administration:	i.c.v.; 1.842 µg;
Result:	Showed antidepressive effect in the tail suspension test (TST).

REFERENCES

- [1]. Masayoshi Okada, et al. Antidepressive effect of an inward rectifier K⁺ channel blocker peptide, tertiapin-RQ. PLoS One. 2020 Nov 13;15(11):e0233815.
- [2]. Bhav G, et al. Development of a selective small-molecule inhibitor of Kir1.1, the renal outer medullary potassium channel. Mol Pharmacol. 2011 Jan;79(1):42-50.

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

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