VU590

Cat. No.: HY-108595

CAS No.: 313505-85-0

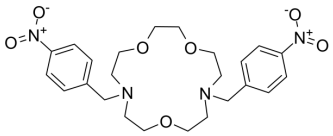
Molecular Formula: $C_{24}H_{32}N_4O_7$

Molecular Weight: 488.53

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 : 50 mg/mL (102.35 mM; ultrasonic and warming and heat to 60°C)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	2.0470 mL	10.2348 mL	20.4696 mL
	5 mM	0.4094 mL	2.0470 mL	4.0939 mL
	10 mM	0.2047 mL	1.0235 mL	2.0470 mL

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

BIOLOGICAL ACTIVITY

Description

VU590 is a potent and moderately selective ROMK (Kir1.1) inhibitor, with an IC_{50} of 290 nM. VU590 also inhibits Kir7.1, with an IC_{50} of 8 μM. VU590 is not a good probe of ROMK function in the kidney[1][2].

IC_{50} & Target

IC_{50}: 290 nM (Kir1.1), 8 μM (Kir7.1)[1]

REFERENCES

[1]. Bhave 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.

[2]. Kharade SV, et al. Pore Polarity and Charge Determine Differential Block of Kir1.1 and Kir7.1 Potassium Channels by Small-Molecule Inhibitor VU590. Mol Pharmacol. 2017 Sep;92(3):338-346.

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

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