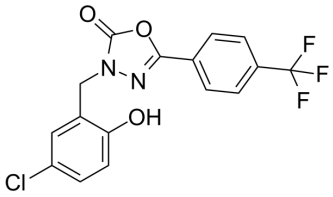
BMS-191011

Cat. No.:	HY-108593
CAS No.:	202821-81-6
Molecular Formula:	$C_{16}H_{10}ClF_3N_2O_3$
Molecular Weight:	370.71
Target:	Potassium Channel
Pathway:	Membrane Transporter/Ion Channel
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 : 100 mg/mL (269.75 mM; Need ultrasonic)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	2.6975 mL	13.4876 mL	26.9753 mL
	5 mM	0.5395 mL	2.6975 mL	5.3951 mL
	10 mM	0.2698 mL	1.3488 mL	2.6975 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 (5.61 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.08 mg/mL (5.61 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

BMS 191011 (BMS-A) is a potent BK_{Ca} channel opener (large-conductance Ca^{2+}-activated potassium channel). BMS-191011 shows neuroprotective activities in rodent models of stroke[1].

In Vitro

BMS-191011 (20 or 40 μM) activates BK channels in IGR39 cells, and leads to potentiation in Panc-1 cells[3].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Cell Viability Assay[3]

Cell Line:	IGR39 and Panc-1 cells

Concentration:	20 or 40 μM
Incubation Time:	
Result:	Activated BK channels in less than 50% IGR39 cells and led to less than two-fold potentiation in Panc-1 cells. Promoted the activation of a voltage-independent K^+ conductance at negative voltages.

In Vivo

BMS-191011 (intravenous injection; 10-100 μg/kg; once) dilates rat retinal arterioles through activation of iberiotoxin-sensitive BK(Ca) channels in vivo[2].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Animal Model:	Male Wistar rats (8- to 10-week-old) treated with Tetrodotoxin (50 μg/kg, intravenously (i.v.)) [2]
Dosage:	10-100 μg/kg
Administration:	Intravenous injection; 10-100 μg/kg; once
Result:	Increased the diameter of retinal arterioles, showed no significant effect on mean arterial pressure and heart rate.

CUSTOMER VALIDATION

- Br J Pharmacol. 2021 Jul 3.
- Eur J Pharmacol. 2023 Apr 19;175743.

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REFERENCES

[1]. Asami Mori, et al. BMS-191011, an opener of large-conductance Ca2+-activated potassium channels, dilates rat retinal arterioles in vivo. Biol Pharm Bull. 2011;34(1):150-2.

[2]. Remigante A, et al. NS-11021 Modulates Cancer-Associated Processes Independently of BK Channels in Melanoma and Pancreatic Duct Adenocarcinoma Cell Lines. Cancers (Basel). 2021 Dec 6;13(23):6144.

[3]. Romine JL, et al. 3-[(5-Chloro-2-hydroxyphenyl)methyl]-5-[4-(trifluoromethyl)phenyl]-1,3,4-oxadiazol-2(3H)-one, BMS-191011: opener of large-conductance Ca(2+)-activated potassium (maxi-K) channels, identification, solubility, and SAR. J Med Chem. 2007 Fe

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