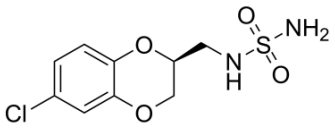
JNJ-26489112

Cat. No.:	HY-12596
CAS No.:	871824-55-4
Molecular Formula:	$C_9H_{11}ClN_2O_4S$
Molecular Weight:	278.71
Target:	Calcium Channel; Sodium Channel; Potassium Channel
Pathway:	Membrane Transporter/Ion Channel; Neuronal Signaling
Storage:	Please store the product under the recommended conditions in the COA.



BIOLOGICAL ACTIVITY

Description	JNJ-26489112, a CNS-active agent, exhibits broad-spectrum anticonvulsant activity in rodents against audiogenic, electrically-induced, and chemically-induced seizures. JNJ-26489112 inhibits voltage-gated **Na^+ channels** and N-type **Ca^{2+} channels**, and is effective as a **K^+ channel** opener. JNJ-26489112 has very weak inhibition of CA-II (IC_{50}=35 μM) and CA-I (18 μM)[1].
In Vitro	JNJ-26489112 inhibits calcium influx in response to depolarization (fluorescence-based assay) with an IC_{50} of 34 μM. In a whole-cell, patch-clamp experiment with low-frequency stimulation (0.07 Hz), intended to measure N-type channel activity directly, JNJ-26489112 causes a concentration-dependent increase in inhibition, with an IC_{50} of 70 μ M. JNJ-26489112 is a KCNQ2 channel opener, particularly at -50 mV[1].
In Vivo	JNJ-26489112 (i.p.) effectively blocks chemically-induced, forelimb clonic seizures in mice (male CF-1 albino mice) that are caused by subcutaneous bicuculine (Bic), picrotoxin (Pic), or pentylenetetrazol (PTZ), with 1-h ED50 values of 197, 189, or 109 mg/kg, respectively[1]. In adult male rats, JNJ-26489112 (p.o; 10 mg/kg) treatment shows the Cmax, tmax, F, t1/2, and AUC (total exposure) values in plasma were 9090 ng/mL (33 μM), 53 min, 95%, 8.2 h, and 53,200 ng-h/mL. Linear, dose-related increases in exposure were observed at 10, 30, and 300 mg/kg. JNJ-26489112 (i.v.; 2 mg/kg) treatment shows the Vdss is 390 mL/kg and the CL is 96 mL/h-kg. In female beagle dogs, JNJ-26489112 (p.o; 10 mg/kg) treatment shows the Cmax, tmax, F, t1/2, and AUC values in plasma are 11,500 ng/mL (41 μM), 55 min, 83%, 20 h, and 212,000 ng-h/mL. . JNJ-26489112 (i.v.; 2 mg/kg) treatment shows the the Vdss and CL values are 630 mL/kg and 30 mL/h-kg, respectively[1].

REFERENCES

[1]. McComsey DF, et al. Novel, broad-spectrum anticonvulsants containing a sulfamide group: pharmacological properties of (S)-N-[(6-chloro-2,3-dihydrobenzo[1,4]dioxin-2-yl)methyl]sulfamide (JNJ-26489112). J Med Chem. 2013;56(22):9019-9030.

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