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Lieferung & Zahlungsart

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Zuschläge

- Mindermengenzuschlag
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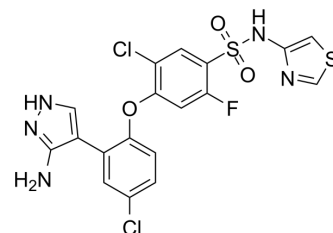
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PF 05089771

Cat. No.:	HY-12883
CAS No.:	1235403-62-9
Molecular Formula:	C ₁₈ H ₁₂ Cl ₂ FN ₅ O ₃ S ₂
Molecular Weight:	500.35
Target:	Sodium 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 (199.86 mM; Need ultrasonic)					
	Preparing Stock Solutions	Solvent Concentration	Mass	1 mg	5 mg	10 mg
		1 mM		1.9986 mL	9.9930 mL	19.9860 mL
		5 mM		0.3997 mL	1.9986 mL	3.9972 mL
		10 mM		0.1999 mL	0.9993 mL	1.9986 mL
Please refer to the solubility information to select the appropriate solvent.						
In Vivo	1. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline) Solubility: 2.5 mg/mL (5.00 mM); Suspended solution; Need ultrasonic					
	2. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline Solubility: ≥ 2.25 mg/mL (4.50 mM); Clear solution					
	3. Add each solvent one by one: 10% DMSO >> 90% corn oil Solubility: ≥ 2.25 mg/mL (4.50 mM); Clear solution					

BIOLOGICAL ACTIVITY

Description	PF 05089771 is a potent, orally active and selective arylsulfonamide Na _v 1.7 inhibitor, with IC ₅₀ values of 11 nM, 12 nM, 13 nM, 171 nM and 8 nM for hNa _v 1.7, cynNa _v 1.7, dogNa _v 1.7, ratNa _v 1.7, and musNa _v 1.7, respectively. PF 05089771 is under the study for pain and diabetic neuropathy ^{[1][2]} .
IC ₅₀ & Target	IC ₅₀ : 11 nM (hNa _v 1.7), 12 nM (cynNa _v 1.7), 13 nM (dogNa _v 1.7), 171 nM (ratNa _v 1.7), 8 nM (musNa _v 1.7) ^{[1][2]} .
In Vitro	PF-05089771 is determined to be more than 1000-fold selective over tetrodotoxin-resistant (TTX-R) Na _v 1.5 and Na _v 1.8

channels ($IC_{50}s > 10 \mu M$) and exhibited a range of selectivity over TTX-sensitive (TTX-S) channels (10-fold for $Na_v1.2$ to 900-fold for $Na_v1.3$ and $Na_v1.4$)^[1].

PF-05089771 (30 nM) blocks the majority of TTX-S current ($75.5 \pm 10.5\%$, $n = 5$, Fig 5D) whilst 100 nM resulted in complete block^[1].

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

CUSTOMER VALIDATION

- Nat Commun. 2023 Jun 3;14(1):3224.
- Front Pharmacol. 16 December 2021.
- FEBS J. 2022 Jan 13.

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REFERENCES

[1]. Alexandrou AJ, et al. Subtype-Selective Small Molecule Inhibitors Reveal a Fundamental Role for Nav1.7 in Nociceptor Electrogenesis, Axonal Conduction and Presynaptic Release. PLoS One. 2016 Apr 6;11(4):e0152405.

[2]. Theile JW, et al. The Selective Nav1.7 Inhibitor, PF-05089771, Interacts Equivalently with Fast and Slow Inactivated Nav1.7 Channels. Mol Pharmacol. 2016 Nov;90(5):540-548.

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

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