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产品名称：4-氯-2-氟-N-(2-氟苯基)-5-[[(8AR)-六氢吡咯并[1,2-A]吡嗪-2(1H)-基]羰基]苯磺酰胺
产品别名：ABT-639

生物活性：

Description	ABT-639 is a novel, peripherally acting, selective T-type Ca^{2+} channel blocker.
IC_{50} & Target	Ca^{2+} Channel[1]
In Vivo	ABT-639 blocks recombinant human T-type ($Ca_v3.2$) Ca^{2+} channels in a voltage-dependent fashion (IC_{50}=2 μM) and attenuates low voltage-activated (LVA) currents in rat DRG neurons (IC_{50}=8 μM). ABT-639 is significantly less active at other Ca^{2+} channels (e.g. $Ca_v1.2$ and $Ca_v2.2$) (IC_{50}>30 mM). ABT-639 has high oral bioavailability (%F=73), low protein binding (88.9%) and a low brain:plasma ratio (0.05:1) in rodents. Following oral administration ABT-639 produces dose-dependent antinociception in a rat model of knee joint pain (ED_{50}=2 mg/kg, p.o.). ABT-639 (10-100 mg/kg, p.o.) also increases tactile allodynia thresholds in multiple models of neuropathic pain (e.g. spinal nerve ligation, CCI, and vincristine-induced, and capsaicin secondary hypersensitivity). ABT-639 does not attenuate hyperalgesia in inflammatory pain models induced by complete Freund's adjuvant or carrageenan. At higher doses (e.g. 100-300 mg/kg) ABT-639 does not significantly alter hemodynamic or psychomotor function. The antinociceptive profile of ABT-639 provides novel insights into the role of peripheral T-type ($Ca_v3.2$) channels in chronic pain states[1].
Solvent&Solubility	***In Vitro:*** **DMSO : 10 mg/mL (21.93 mM;** Need ultrasonic and warming) * "≥" means soluble, but saturation unknown.

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	2.1934 mL	10.9671 mL	21.9342 mL
	5 mM	0.4387 mL	2.1934 mL	4.3868 mL
	10 mM	0.2193 mL	1.0967 mL	2.1934 mL

*请根据产品在不同溶剂中的溶解度选择合适的溶剂配制储备液；一旦配成溶液，请分装保存，避免反复冻融造成的产品失效。

储备液的保存方式和期限：-80°C, 6 months; -20°C, 1 month。-80°C 储存时，请在 6 个月内使用，-20°C 储存时，请在 1 个月内使用。

References	[1]. Jarvis MF, et al. A peripherally acting, selective T-type calcium channel blocker, ABT-639, effectively reduces nociceptive and neuropathic pain in rats. Biochem Pharmacol. 2014 Jun 15;89(4):536-44.

实验参考：

	Rats[1] The pharmacokinetic properties are determined in Sprague Dawley rats dosed intravenously with 5 μmol/kg ABT-639 prepared in 10% DMSO/90% poly ethylene glycol 400 (PEG400). The plasma levels of ABT-639 are determined using HPLC and mass spectrometry. Following oral administration (p.o.) of the ABT-639 (3, 10 and 30 mg/kg) prepared in 10% PEG400/10% Cremophor EL/80% Oleic Acid the levels of ABT-639 in plasma and brain are determined. Briefly, the brains are immediately removed and freed from blood vessels as much as possible. The

Animal Administration	resulting brain tissues are frozen at -20°C, followed by weighing and homogenization before analysis. The heparinized blood samples are also frozen (-20°C) until analysis. ABT-639 is separated from the blood and brain samples using protein precipitation with acetonitrile followed by quantification with liquid chromatography/mass spectroscopy. Plasma samples for concentration determinations from in vivo efficacy experiments are collected from each animal within 15 min following behavioral testing.
References	[1]. Jarvis MF, et al. A peripherally acting, selective T-type calcium channel blocker, ABT-639, effectively reduces nociceptive and neuropathic pain in rats. Biochem Pharmacol. 2014 Jun 15;89(4):536-44.