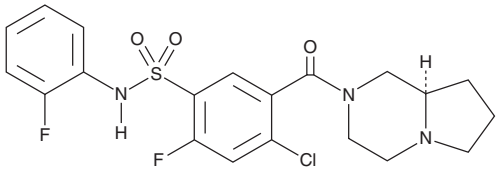
PRODUCT INFORMATION

ABT-639

Item No. 28742

CAS Registry No.: 1235560-28-7
Formal Name: 4-chloro-2-fluoro-N-(2-fluorophenyl)-5-[[(8aR)-hexahydropyrrolo[1,2-a]pyrazin-2(1H)-yl]carbonyl]-benzenesulfonamide
MF: $C_{20}H_{20}ClF_2N_3O_3S$
FW: 455.9
Purity: ≥98%
Supplied as: A solid
Storage: -20°C
Stability: ≥4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

ABT-639 is supplied as a solid. A stock solution may be made by dissolving the ABT-639 in the solvent of choice, which should be purged with an inert gas. ABT-639 is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of ABT-639 in these solvents is approximately 0.5, 10, and 14 mg/ml, respectively.

ABT-639 is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, ABT-639 should first be dissolved in DMF and then diluted with the aqueous buffer of choice. ABT-639 has a solubility of approximately 0.04 mg/ml in a 1:20 solution of DMF:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

ABT-639 is a T-type calcium channel blocker.[1] It inhibits inactivated-state $Ca_v3.2$ channels with an IC_{50} value of 2.3 µM and inactivated-state $Ca_v3.1$ and $Ca_v3.3$ channels by 50 and 39%, respectively, when used at a concentration of 10 µM. ABT-639 selectively inhibits inactivated-state T-type calcium currents over resting-state currents in rat dorsal root ganglion (DRG) neurons (IC_{50}s = 7.6 and >30 µM, respectively). It reverses the hind limb grip force deficit in a rat model of osteoarthritic pain induced by monoiodoacetic acid (MIA; ED_{50} = 2 mg/kg). ABT-639 also increases the paw withdrawal threshold in rat spinal nerve ligation (SNL) and chronic constriction injury (CCI) models of neuropathic pain in a dose-dependent manner and attenuates cold allodynia in the CCI rat model when administered at doses greater than or equal to 3 mg/kg.

Reference

1. Jarvis, M.F., Scott, V.E., McGaraughty, S., *et al.* A peripherally acting, selective T-type calcium channel blocker, ABT-639, effectively reduces nociceptive and neuropathic pain in rats. *Biochem. Pharmacol.* **89(4)**, 536-544 (2014).

CAYMAN CHEMICAL
1180 EAST ELLSWORTH RD
ANN ARBOR, MI 48108 · USA
PHONE: [800] 364-9897
[734] 971-3335
FAX: [734] 971-3640
CUSTSERV@CAYMANCHEM.COM
WWW.**CAYMANCHEM**.COM