

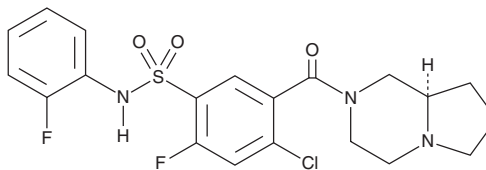
# PRODUCT INFORMATION



## 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<sub>20</sub>H<sub>20</sub>ClF<sub>2</sub>N<sub>3</sub>O<sub>3</sub>S  
**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.<sup>1</sup> It inhibits inactivated-state Ca<sub>v</sub>3.2 channels with an IC<sub>50</sub> value of 2.3 μM and inactivated-state Ca<sub>v</sub>3.1 and Ca<sub>v</sub>3.3 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<sub>50</sub>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<sub>50</sub> = 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).

#### WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

#### SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

#### WARRANTY AND LIMITATION OF REMEDY

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