

Product Data Sheet

Product Name: MK-5661

Cat. No.: GC79546

Chemical Properties

Cas. No. 2417328-24-4

Formula $C_{18}H_{18}F_5N_5O_3S$

M.Wt 479.42

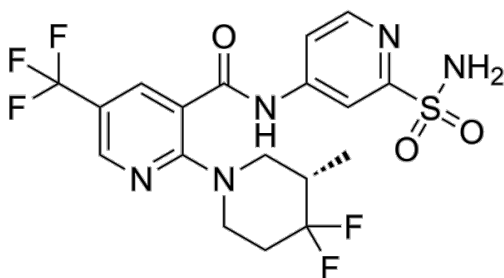
Solubility

Storage Store at -20°C

General tips For obtaining a higher solubility, please warm the tube at 37 °C and shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°C for several months.

Shipping Condition Evaluation sample solution : ship with blue ice All other available size: ship with RT, or blue ice upon request.

Structure



Background

MK-5661 is an orally potent Na V 1.8 voltage-gated sodium channel inhibitor with an EC₅₀ of 4.3 nM. MK-5661 selectively inhibits peripheral nociceptive signaling mediators. MK-5661 reduces capsaicin-induced spontaneous nociceptive behaviors in humanized rats and attenuates capsaicin-induced skin flushing responses in rhesus monkeys. MK-5661 is applicable for pain-related research [1].

In Vivo, MK-5661 (0.1-10 mg/kg; p.o.; single dose) dose-dependently inhibits capsaicin-induced nocifensive behavior in humanized rats^[1]. MK-5661 (0.2-2 mg/kg; p.o.; single dose) significantly

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

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attenuates capsaicin-induced dermal flare area in rhesus macaques^[1].

In Vitro, MK-5661 potently modulates human NaV1.8 channels stably expressed in HEK 293 cells with an EC₅₀ of 4.3 nM and a VLE of 6.5^[1]. MK-5661 is highly selective for human NaV1.8 channels, with IC₅₀ values greater than 30 µM against human NaV1.2, NaV1.4, NaV1.5, NaV1.6, and NaV1.7 channels stably expressed in HEK-293 cells^[1].

References:

[1]. Bungard CJ, et al. Discovery of MK-5661, a Once-Daily Oral Na V 1.8 Inhibitor for the Treatment of Pain. ACS Med Chem Lett. 2026;17(5):1189-1194. Published 2026 Apr 24.

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