

Product Data Sheet

Product Name: TRPA1 agonist-3

Cat. No.: GC79522

Chemical Properties

Cas. No. 3083086-77-2

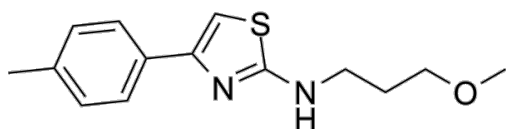
Formula $C_{14}H_{18}N_2OS$ M.Wt 262.37

Solubility DMSO: 100 mg/mL (381.14 mM; Need ultrasonic) 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

TRPA1 agonist-3 is a selective and orally active TRPA1 agonist, with EC 50 values of 50.05 μM and

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314.04 μ M for human and mouse TRPA1, respectively. TRPA1 agonist-3 does not activate hTRPV1, mTRPV2, hTRPV3, hTRPV4, hTRPC6, or hTRPM8 channels. TRPA1 agonist-3 alleviates inflammatory pain in mice through a channel desensitization mechanism [1].

In Vivo, TRPA1 agonist-3 (compound NMTA) (10-40 mg/kg, p.o., once) alleviates CFA (Complete Freund's Adjuvant) (plantar injection p.i., 20 μ L)-induced inflammatory pain in male C57BL/6J mice[1]. TRPA1 agonist-3 (10-40 mg/kg, p.o. once) has selective desensitization of TRPA1 rather than direct inhibition of heat-sensitive channels in male C57BL/6J mice[1]. TRPA1 (10-40 mg/kg, p.o., once) agonist-3 has antinociceptive effect on cold-induced pain in male C57BL/6J mice[1].

In Vitro, TRPA1 agonist-3 (compound NMTA) (50 μ M, 24 h) activates hTRPA1 channels in a concentration dependent manner, leading to Ca^{2+} influx in HEK-293T cells[1]. TRPA1 agonist-3 exerts analgesic effects mediated through TRPA1 desensitization[1].

References:

[1]. Sun C, et al. Identification of a Nonelectrophilic and Selective TRPA1 Agonist for Alleviation of Inflammatory Pain through Channel Desensitization. ACS Chem Neurosci. 2025 Sep 3;16(17):3257-3266.

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