

Product Data Sheet

Product Name: AS 19
Cat. No.: GC17525

Chemical Properties

Cas. No. 1000578-26-6

Chemical Name (2S)-N,N-dimethyl-8-(1,3,5-trimethyl-1H-pyrazol-4-yl)-1,2,3,4-tetrahydronaphthalen-2-amine

SMILES CC1=NN(C(C)=C1C2=CC=CC3=C2C[C@](N(C)C)([H])CC3)C

Formula $C_{18}H_{25}N_3$ M.Wt 283.41

Solubility <28.34mg/ml in ethanol;
<28.34mg/ml in DMSO Storage Desiccate 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.

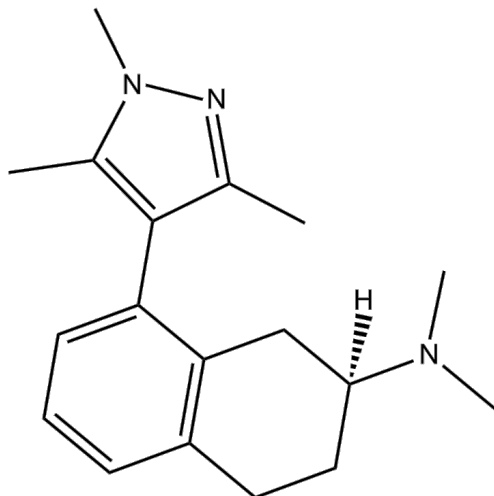
Caution: Product has not been fully validated for medical applications. For research use only.

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Structure



Background

AS 19 is a potential 5-HT7 receptor agonist with an IC₅₀ value of 0.83 nM [1].

5-HT7 receptor plays a role in the control of both sleep and circadian rhythms. This receptor may also play a role in other CNS disorders including cognitive disturbances, anxiety and migraine probably via both central and peripheral mechanisms [2].

By signaling through the 5-HT7 receptor, serotonin provides an accessory signal to enhance the activation of the T-cell. Compared with saline-treated controls, the proliferation of T-cell from PCPA-treated mice was significantly reduced. The PCPA inhibition efficacy ranged from approximately 18% to 49%. Addition of exogenous 5-HT at 1 μ M completely restored the proliferation of the T-cell. Similar to exogenous 5-HT, addition of AS19 at 1 μ M also completely restored T-cell proliferation after 48 hours [4].

SB-258719 is a selective 5-HT7 receptor antagonist. When AS-19 at a dose of 10 mg/kg was co-administered with SB-258719 at the same dose, which produced no effect on its own, the anti-hyperalgesic effect of AS-19 was reversed in both hotplate and tail-flick tests. That meant AS-19

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exerts anti-hyperalgesic effect via 5-HT₇ receptors [3]. SB269970 is also a selective 5-HT₇ receptor antagonist. Some rats were prepared with a second intrathecal catheter and were pretreated with 7μl SB269970 at a concentration of 5mM. At all time points, AS-19-induced PMF was abolished by SB269970 pretreatment. This meant AS-19 elicited PMF via the activation of 5-HT₇ receptor [5].

References:

- [1]. Perez-García GS and Meneses A. Effects of the potential 5-HT₇ receptor agonist AS 19 in an autoshaping learning task. Behav Brain Res, 2005, 163(1):136-40.
- [2]. Thomas DR and Hagan JJ. 5-HT₇ Receptors. Current Drug Targets-CNS & Neurological Disorders, 2004, 3(1): 81-90.
- [3]. Ulugol A, Oltulu C, Gunduz O, et al. 5-HT₇ receptor activation attenuates thermal hyperalgesia in streptozocin-induced diabetic mice. Pharmacol Biochem Behav, 2012, 102(2):344-8.
- [4]. León-Ponte M, Ahern GP and O'Connell PJ. Serotonin provides an accessory signal to enhance T-cell activation by signaling through the 5-HT₇ receptor. Blood, 2007, 109(8):3139-46.
- [5]. Hoffman MS and Mitchell GS. Spinal 5-HT₇ receptor activation induces long-lasting phrenic motor facilitation. J Physiol, 2011, 589(Pt 6):1397-407.

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