

Product Data Sheet

Product Name: ONO-8590580

Cat. No.: GC19271

Chemical Properties

Cas. No. 1802661-73-9

SMILES CN1C=C(C2=CN=C(NC3=C(F)C(C)=C4N=CN(CC5CC5)C4=C3)C=C2)N=C1

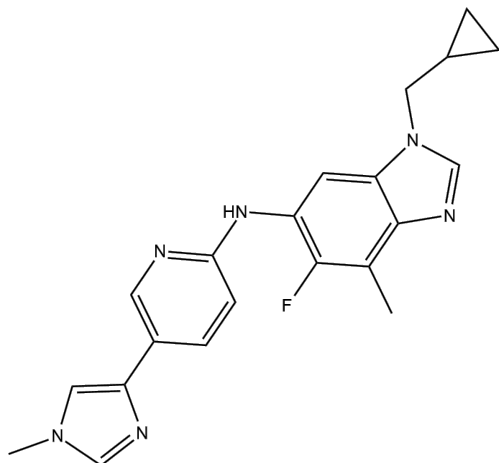
Formula $C_{21}H_{21}FN_6$ M.Wt 376.43

Solubility DMSO : 62.5 mg/mL (166.03 mM) 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



Protocol

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

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Address: 10292 Central Ave. #205, Montclair, CA, USA

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Animal experiment: Rats[1] Male Sprague-Dawley rats are used. ONO-8590580 is orally administered 1 h before sacrifice. [3H]-Ro15-4513 (1.11 MBq/kg) is administered via the tail vein (1 mL/kg) 10 min before sacrifice. Rats (n=12 in each group) are given either vehicle, ONO-8590580 (20 mg/kg, p.o.), or as a positive control, the GABAA nonselective NAM FG-7142 (15 mg/kg, i.p.). After 1 h, rats are placed in the elevated plus maze for 5 min. Light intensity in the open arms is set at 20 lx. A video camera fitted with a polarizing lens is mounted above the maze, connected to a tracking and analyse system[1]. Mice[1] Mice (n=8 in each group) are intraperitoneally administered with either vehicle, ONO-8590580 (10 mg/kg), or FG-7142 (10 mg/kg). After 30 min, the mice are infused with 15 mg/mL PTZ solution (infusion rate 0.2 mL/min), and the time taken to reveal clonic seizures is measured, and from this the dose administered is calculated[1].

References:

[1]. Kawaharada S, et al. ONO-8590580, a Novel GABAA α 5 Negative Allosteric Modulator Enhances Long-Term Potentiation and Improves Cognitive Deficits in Preclinical Models. J Pharmacol Exp Ther. 2018 Jul;366(1):58-65.

Background

ONO-8590580 is a GABAA α 5 negative allosteric modulator.

The effect of ONO-8590580 on the MK-801/scopolamine-induced cognitive deficit in the 8-arm radial maze test is investigated. Doses of MK-801 and scopolamine for this test are 0.075 mg/kg (i.p.) and 0.2 mg/kg (i.p.) respectively. ONO-8590580 (20 mg/kg, p.o.) significantly decreases the number of errors and total latency compared to the control. The present study in which ONO-8590580 but not donepezil significantly decreases the number of errors may suggest that ONO-8590580 could be more potent for the treatment of AD patients. The data showing that ONO-8590580 has not anxiogenic-like or proconvulsant effects are in agreement with the behavioral phenotype of α 5 β 1 mice[1].

References:

[1]. Kawaharada S, et al. ONO-8590580, a Novel GABAA α 5 Negative Allosteric Modulator Enhances

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