

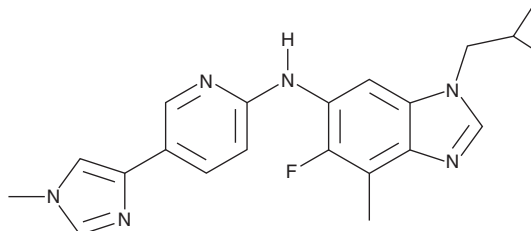
PRODUCT INFORMATION



ONO-8590580

Item No. 35297

CAS Registry No.: 1802661-73-9
Formal Name: 1-(cyclopropylmethyl)-5-fluoro-4-methyl-N-[5-(1-methyl-1H-imidazol-4-yl)-2-pyridinyl]-1H-benzimidazol-6-amine
MF: C₂₁H₂₁FN₆
FW: 376.4
Purity: ≥98%
UV/Vis.: λ_{max}: 266, 290, 320 nm
Supplied as: A crystalline 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

ONO-8590580 is supplied as a crystalline solid. A stock solution may be made by dissolving the ONO-8590580 in the solvent of choice, which should be purged with an inert gas. ONO-8590580 is soluble in DMSO.

Description

ONO-8590580 is a negative allosteric modulator of α_5 subunit-containing GABA_A receptors that binds at the benzodiazepine binding site.¹ It binds to α_1 , α_2 , α_3 , and α_5 subunit-containing GABA_A receptors (K_i s = 140, 32, 24, and 7.9 nM, respectively). It is selective for inhibiting GABA-induced currents in HEK293 cells expressing human recombinant $\alpha_5\beta_3\gamma_2$ subunits (EC_{50} = 1.1 nM) over those expressing human recombinant $\alpha_1\beta_3\gamma_2$, $\alpha_2\beta_3\gamma_2$, or $\alpha_3\beta_3\gamma_2$ subunits for which it has little to no activity. ONO-8590580 (300 nM) enhances long-term potentiation in rat hippocampal brain slices. It decreases MK-801-induced memory deficits in the rat passive avoidance test when administered at doses ranging from 3 to 20 mg/kg. ONO-8590580 (20 mg/kg, p.o.) decreases MK-801- and scopolamine-induced increases in the latency to complete, and the number of errors made in, the eight-arm radial maze test in rats. It does not induce anxiety-like or proconvulsant behavior in rats in the elevated zero maze or pentylenetetrazole-induced seizure test when administered at a dose of 20 mg/kg.

Reference

1. Kawaharada, S., Nakanishi, M., Nakanishi, N., et al. ONO-8590580, a novel GABA_A α_5 negative allosteric modulator enhances long-term potentiation and improves cognitive deficits in preclinical models. *J. Pharmacol. Exp. Ther.* **366**(1), 58-65 (2018).

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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