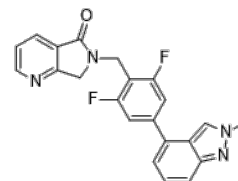


Product Name : VU0467319
Cat. No. : PC-23641
CAS No. : 1432438-14-6
Molecular Formula : C₂₂H₁₆F₂N₄O
Molecular Weight : 390.39
Target : mAChR
Solubility : 10 mM in DMSO



CAS: 1432438-14-6

Biological Activity

VU0467319 (VU319, ACP-319) is a potent, selective and CNS penetrant **M1 mAChR** positive allosteric modulator (PAM) with EC₅₀ of 492 nM, with minimal M1 agonism (EC₅₀ > 30 μM).

VU0467319 (VU319) potentiates M1 in all three species: rat (M1 EC₅₀ = 398 nM, 81.3 ± 11.3% ACh Max), mouse (M1 EC₅₀ = 728 nM, 55.9 ± 5.6% ACh Max) and cyno (M1 EC₅₀ = 374 nM, 57.8% ACh max).

VU0467319 (VU319) is ineffective in shifting ACh affinity at rat M2, M3, M4 or M5 receptors.

VU0467319 (VU319) potentiates the recruitment of β-arrestin2 to the human M1 receptor in a concentration dependent manner (EC₅₀ = 890 nM, 72% max).

VU0467319 (VU319) also potentiates the response of oxotremorine-M (M1 EC₅₀ = 400 nM, 59% ACh Max, M2–5 EC₅₀ > 30 μM), but was ineffective at potentiating xanomeline, clozapine or N-desmethylozapine (NDMC).

VU0467319 (VU319) demonstrated the feasibility of achieving selective targeting of central M1 muscarinic receptors without eliciting cholinergic AEs that have plagued other drugs targeting CNS cholinergic neurotransmission.

References

Poslunsey MS, et al. *ACS Chem Neurosci*. 2024 Dec 11. doi: 10.1021/acscchemneuro.4c00769.

Caution: Product has not been fully validated for medical applications. Lab Use Only!

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