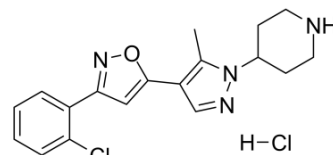


nAChR agonist CMPI hydrochloride

Cat. No.:	HY-136258
CAS No.:	2250025-94-4
Molecular Formula:	C ₁₈ H ₂₀ Cl ₂ N ₄ O
Molecular Weight:	379.28
Target:	nAChR
Pathway:	Membrane Transporter/Ion Channel; Neuronal Signaling
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description	nAChR agonist CMPI hydrochloride is a potent and selective positive allosteric modulator (PAM) of nAChR containing a $\alpha 4:\alpha 4$ subunit interface. nAChR agonist CMPI hydrochloride enhances the response of $(\alpha 4)_3(\beta 2)_2$ nAChR to ACh (10 μ M) with an EC ₅₀ of 0.26 μ M. nAChR agonist CMPI hydrochloride has potential for the research of nicotine dependence and many neuropsychiatric conditions associated with decreased brain cholinergic activity ^{[1][2]} .
IC₅₀ & Target	nAChR ^[1]
In Vitro	CMPI (0.01-10 μ M) potentiates $(\alpha 4)_3(\beta 2)_2$ (low ACh sensitivity) but not $(\alpha 4)_2(\beta 2)_3$ (high ACh sensitivity) nAChRs in <i>Xenopus laevis</i> oocytes ^[1] . CMPI (0.01-10 μ M) inhibits $(\alpha 4)_2(\beta 2)_3$, human muscle and Torpedo nAChRs with IC ₅₀ s of 0.6, 0.7 and 0.2 μ M, respectively in <i>Xenopus oocytes</i> ^[1] . MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

- [1]. Hamouda AK, et, al. Photolabeling a Nicotinic Acetylcholine Receptor (nAChR) with an $(\alpha 4)_3(\beta 2)_2$ nAChR-Selective Positive Allosteric Modulator. *Mol Pharmacol*. 2016 May;89(5):575-84.
- [2]. Wang ZJ, et, al. Unraveling amino acid residues critical for allosteric potentiation of $(\alpha 4)_3(\beta 2)_2$ -type nicotinic acetylcholine receptor responses. *J Biol Chem*. 2017 Jun 16;292(24):9988-10001.

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

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