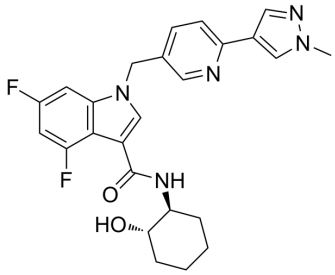
VU6004256

Cat. No.:	HY-117408
CAS No.:	2011034-33-4
Molecular Formula:	$C_{25}H_{25}F_2N_5O_2$
Molecular Weight:	465.5
Target:	mAChR
Pathway:	GPCR/G Protein; Neuronal Signaling
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description	VU6004256 is a potent and selective M1 muscarinic positive allosteric modulator (PAM) with an EC_{50} value of 155 nM. VU6004256 has the potential for the research of schizophrenia[1].
IC_{50} & Target	mAChR1 155 nM (EC50)
In Vivo	VU6004256 (10 mg/kg; i.p.) attenuates excessive pyramidal cell firing in the prefrontal cortex of NR1 KD mice[1]. VU6004256 (3, 10 mg/kg; i.p.) reverses the performance impairments in novel object recognition and cue-mediated fear conditioning tasks and reduces hyper locomotor activity in NR1 KD mice[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Animal Model:	Adult male NR1 KD mice[1]
Dosage:	10 mg/kg
Administration:	I.p.
Result:	Showed no effect on pyramidal cell firing rate in WT littermate controls, significantly reduced pyramidal cell firing rate in NR1 KD mice.

Animal Model:	Wild-type and NR1 KD mice[1]
Dosage:	3, 10 mg/kg
Administration:	I.p.
Result:	Dose-dependently reduced locomotor activity in NR1 KD, but not in WT mice, resulted in dose-dependent increases in recognition index in WT and NR1 KD mice; improved performance on test day in cue-mediated conditioned freezing in NR1 KD but not WT mice.

REFERENCES

[1]. Grannan MD, et al. Prefrontal Cortex-Mediated Impairments in a Genetic Model of NMDA Receptor Hypofunction Are Reversed by the Novel M1 PAM VU6004256. ACS Chem Neurosci. 2016 Dec 21;7(12):1706-1716.

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