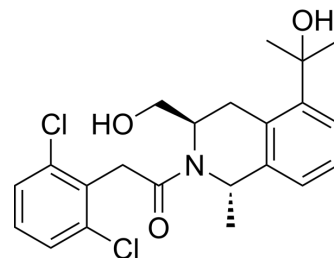


DETQ

Cat. No.:	HY-115553
CAS No.:	1638667-81-8
Molecular Formula:	C ₂₂ H ₂₅ Cl ₂ NO ₃
Molecular Weight:	422.34
Target:	Dopamine Receptor
Pathway:	GPCR/G Protein; Neuronal Signaling
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description	DETQ is a selective, allosteric and orally active dopamine D1 receptor (Dopamine Receptor) potentiator. In HEK293 cells expressing the human D1 receptor, DETQ increases cAMP with an EC ₅₀ of 5.8 nM and a K _b of 26 nM. DETQ shows ~30-fold less potent at rat and mouse D1 receptors and is inactive at the human D5 receptor ^[1] .									
IC₅₀ & Target	Human D ₁ Receptor 5.8 nM (EC ₅₀)									
In Vivo	<p>DETQ (10 mg/kg; i.p.; once) ameliorates subchronic Phencyclidine-induced object recognition memory deficits and enhances cortical acetylcholine efflux in male humanized D1 receptor knock-in mice^[2].</p> <p>MCE has not independently confirmed the accuracy of these methods. They are for reference only.</p> <table border="1"> <tr> <td>Animal Model:</td> <td>Mice genetically modified to express the human D1 receptor ("hD1 mice")^[2]</td> </tr> <tr> <td>Dosage:</td> <td>10 mg/kg</td> </tr> <tr> <td>Administration:</td> <td>i.p.; once</td> </tr> <tr> <td>Result:</td> <td>Ameliorated subchronic Phencyclidine-induced object recognition memory deficits.</td> </tr> </table>		Animal Model:	Mice genetically modified to express the human D1 receptor ("hD1 mice") ^[2]	Dosage:	10 mg/kg	Administration:	i.p.; once	Result:	Ameliorated subchronic Phencyclidine-induced object recognition memory deficits.
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Dosage:	10 mg/kg									
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Result:	Ameliorated subchronic Phencyclidine-induced object recognition memory deficits.									

REFERENCES

[1]. Kjell A Svensson, et al. An Allosteric Potentiator of the Dopamine D1 Receptor Increases Locomotor Activity in Human D1 Knock-In Mice without Causing Stereotypy or Tachyphylaxis. *J Pharmacol Exp Ther.* 2017 Jan;360(1):117-128.

[2]. Herbert Y Meltzer, et al. The allosteric dopamine D1 receptor potentiator, DETQ, ameliorates subchronic phencyclidine-induced object recognition memory deficits and enhances cortical acetylcholine efflux in male humanized D1 receptor knock-in mice. *Behav Brain Res.* 2019 Apr 1;361:139-150.

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

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