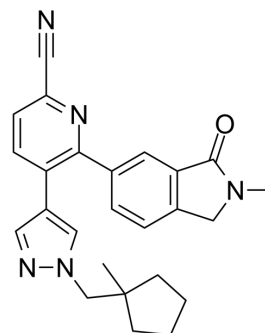


MK-6884

Cat. No.:	HY-141899		
CAS No.:	2102194-04-5		
Molecular Formula:	C ₂₅ H ₂₅ N ₅ O		
Molecular Weight:	411.5		
Target:	mAChR		
Pathway:	GPCR/G Protein; Neuronal Signaling		
Storage:	Powder	-20°C	3 years
		4°C	2 years
	In solvent	-80°C	6 months
		-20°C	1 month



SOLVENT & SOLUBILITY

In Vitro

THF : 3.33 mg/mL (8.09 mM; Need ultrasonic)

Concentration	Mass		
	1 mg	5 mg	10 mg
1 mM	2.4301 mL	12.1507 mL	24.3013 mL
5 mM	0.4860 mL	2.4301 mL	4.8603 mL
10 mM	---	---	---

Please refer to the solubility information to select the appropriate solvent.

BIOLOGICAL ACTIVITY

Description

MK-6884 is a M4 muscarinic receptor positive allosteric modulator (PAM) with a K_i value of 0.19 nM. MK-6884 can be used for the research of the neurodegenerative diseases. MK-6884 can be conveniently radiolabeled with carbon-11 and as a positron emission tomography (PET) imaging agent^[1].

IC₅₀ & Target

mAChR4

In Vitro

MK-6884 (compound 13; 0-22 μM) is a PAM of ACh function in a cell-based Ca²⁺ mobilization assay, with an EC₅₀ of 27 nM^[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

In Vivo

[¹¹C]MK-6884 (compound 13) shows non-displaceable binding potential (BP_{ND}) of 0.83 in rhesus monkeys^[1].
 [¹¹C]MK-6884 (approximately 185 MBq, <2 μg; single intravenous) distributes on the known presence of M4 receptors in the rhesus monkeys brain^[1].
 [¹¹C]MK-688 can penetrate the blood-brain barrier in monkeys^[1].
 MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

[1]. Tong L, et al. Discovery of [¹¹C]MK-6884: A Positron Emission Tomography (PET) Imaging Agent for the Study of M4Muscarinic Receptor Positive Allosteric Modulators (PAMs) in Neurodegenerative Diseases. J Med Chem. 2020;63(5):2411-2425.

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

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