VQW-765

Cat. No.: HY-19490

CAS No.: 669770-29-0

Molecular Formula: $C_{19}H_{22}N_2O$

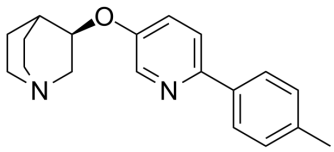
Molecular Weight: 294.39

Target: nAChR

Pathway: Membrane Transporter/Ion Channel; Neuronal Signaling

Storage: 4°C, sealed storage, away from moisture

* In solvent : -80°C, 6 months; -20°C, 1 month (sealed storage, away from moisture)



SOLVENT & SOLUBILITY

In Vitro

DMSO : 16.67 mg/mL (56.63 mM; ultrasonic and warming and heat to 60°C)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	3.3969 mL	16.9843 mL	33.9685 mL
	5 mM	0.6794 mL	3.3969 mL	6.7937 mL
	10 mM	0.3397 mL	1.6984 mL	3.3969 mL

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

BIOLOGICAL ACTIVITY

Description

VQW-765 (AQW-051) is a selective and orally active alpha-7 nicotinic acetylcholine receptor (α7-nAChR) agonist with a pK_D value of 7.56 to recombinantly expressed human α7-nAChR. VQW-765 shows anxiolytic-like effect in vivo. VQW-765 can be used for the research of anxiety disorder and acute performance anxiety[1].

In Vitro

VQW-765 shows a binding efficacy with a pK_D value of 7.56 to recombinantly expressed human α7-nACh receptor[1].

VQW-765 shows a potent agonist activity to calcium transients that detected after stimulation of human α7-nACh receptors recombinantly expressed in GH3-ha7-22 cells with a pEC_{50} value of 7.41[1].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

In Vivo

VQW-765 (0.03 and 0.3 mg/kg; oral administration once) increases cognitive effect and learning/memory performance in mice[1].

VQW-765 (1 mg/kg; oral administration once) shows anxiolytic-like effect with increasing the social exploration time in rats with a duration of at least 6 h[1].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Animal Model:	OF1/IC strain adult mice[1]
Dosage:	0.03 and 0.3 mg/kg
Administration:	Oral administration; 0.03 and 0.3 mg/kg once
Result:	Increased the learning/memory performance with more time to scrutinize the novel partner than the familiar partner during the re-test trial at 24 h. Showed cognitive-enhancing effects in mice by the object recognition test (ORT).

REFERENCES

[1]. Feuerbach D, et al. AQW051, a novel, potent and selective α7 nicotinic ACh receptor partial agonist: pharmacological characterization and phase I evaluation. Br J Pharmacol. 2015 Mar;172(5):1292-304.

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