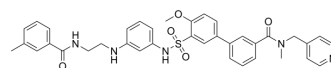


## RTIOXA-43

Cat. No.:	HY-154789		
CAS No.:	2832067-72-6		
Molecular Formula:	C <sub>37</sub> H <sub>37</sub> N <sub>5</sub> O <sub>5</sub> S		
Molecular Weight:	663.79		
Target:	Orexin Receptor (OX Receptor)		
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	DMSO : 100 mg/mL (150.65 mM; Need ultrasonic)					
		Solvent Concentration	Mass	1 mg	5 mg	10 mg
	Preparing Stock Solutions	1 mM		1.5065 mL	7.5325 mL	15.0650 mL
		5 mM		0.3013 mL	1.5065 mL	3.0130 mL
10 mM			0.1507 mL	0.7533 mL	1.5065 mL	
Please refer to the solubility information to select the appropriate solvent.						
In Vivo	1. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline Solubility: 2.5 mg/mL (3.77 mM); Clear solution; Need ultrasonic					
	2. Add each solvent one by one: 10% DMSO >> 90% corn oil Solubility: 2.5 mg/mL (3.77 mM); Clear solution; Need ultrasonic					

### BIOLOGICAL ACTIVITY

Description	RTIOXA-43 is a orexin receptor agonist with EC <sub>50</sub> s of 24 nM and 24 nM for OX2 and OX1 receptors, respectively <sup>[1]</sup> .	
IC <sub>50</sub> & Target	OX1 24 nM (EC50)	OX2 24 nM (EC50)
In Vivo	In adult (12 month) mice, peripheral injection of RTIOXA-43 improves wake time, reduced sleep time and sleep/wake fragmentation. In addition, RTIOXA-43 improves sleep/wake quality by decreasing the number of episodes and increasing the duration of these episodes <sup>[2]</sup> . MCE has not independently confirmed the accuracy of these methods. They are for reference only.	

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## REFERENCES

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[1]. Yanan Zhang, et al. Arylsulfoxamides as orexin receptor agonists. WO2022187231A1.

[2]. Kotz, Catherine, et al. Small Molecule Orexin Agonists Enhance Physical Activity, Cognition and Sleep Quality in Aged Mice. Obesity; Silver Spring Vol. 29, (Dec 2021): 163.

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

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