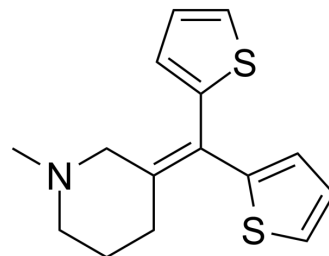


## Tipepidine

<b>Cat. No.:</b>	HY-121685
<b>CAS No.:</b>	5169-78-8
<b>Molecular Formula:</b>	C <sub>15</sub> H <sub>17</sub> NS <sub>2</sub>
<b>Molecular Weight:</b>	275.43
<b>Target:</b>	Potassium Channel
<b>Pathway:</b>	Membrane Transporter/Ion Channel
<b>Storage:</b>	Please store the product under the recommended conditions in the Certificate of Analysis.



### SOLVENT & SOLUBILITY

#### In Vitro

DMSO : 250 mg/mL (907.67 mM; Need ultrasonic)

Preparing Stock Solutions	Solvent Concentration	Mass		
		1 mg	5 mg	10 mg
	1 mM	3.6307 mL	18.1534 mL	36.3069 mL
	5 mM	0.7261 mL	3.6307 mL	7.2614 mL
	10 mM	0.3631 mL	1.8153 mL	3.6307 mL

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

### BIOLOGICAL ACTIVITY

#### Description

Tipepidine reversibly inhibits dopamine (DA) D<sub>2</sub> receptor-mediated GIRK currents (I<sub>DA(GIRK)</sub>) with an IC<sub>50</sub> of 7.0 μM. Tipepidine subsequently activates VTA dopamine neuron<sup>[1]</sup>. Tipepidine, a non-narcotic antitussive, exerts an antidepressant-like effect<sup>[2]</sup>.

#### IC<sub>50</sub> & Target

IC<sub>50</sub>: 7.0 μM (dopamine D<sub>2</sub> receptor)<sup>[1]</sup>

#### In Vivo

Tipepidine (i.p.; 10-40 mg/kg; 0.5-23 hours) significantly decreases the immobility time in the forced swimming test in ACTH-treated rats. Tipepidine (i.p.; 40 mg/kg) increases the extracellular dopamine level of the nucleus accumbens (NAC) in ACTH-treated rats<sup>[2]</sup>.

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

Animal Model:	Male Wistar rats weighting 150-240 g (5-7 weeks old) <sup>[2]</sup>
Dosage:	10, 20 and 40 mg/kg.
Administration:	I.p.; 0.5, 5, 23 hours.

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Result:	Decreased the immobility time in the forced swimming test in ACTH-treated rats.
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## REFERENCES

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[1]. Hamasaki R, et al. Titepidine activates VTA dopamine neuron via inhibiting dopamine D<sub>2</sub> receptor-mediated inward rectifying K<sup>+</sup> current. Neuroscience. 2013 Nov 12;252:24-34.

[2]. Kawaura K, et al. Titepidine, a non-narcotic antitussive, exerts an antidepressant-like effect in the forced swimming test in adrenocorticotrophic hormone-treated rats. Behav Brain Res. 2016 Apr 1;302:269-78.

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

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