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Zuschläge

- Mindermengenzuschlag
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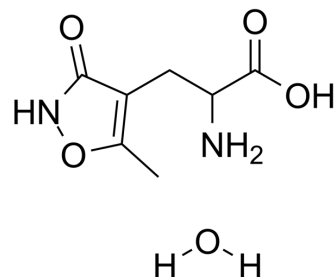
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(RS)-AMPA monohydrate

Cat. No.:	HY-100815D
CAS No.:	76463-67-7
Molecular Formula:	C ₇ H ₁₂ N ₂ O ₅
Molecular Weight:	204.18
Target:	iGluR
Pathway:	Membrane Transporter/Ion Channel; Neuronal Signaling
Storage:	-20°C, protect from light, stored under nitrogen * In solvent : -80°C, 6 months; -20°C, 1 month (protect from light, stored under nitrogen)



SOLVENT & SOLUBILITY

In Vitro	H ₂ O : 5 mg/mL (24.49 mM); ultrasonic and warming and heat to 60°C				
		Solvent Concentration	Mass 1 mg	5 mg	10 mg
	Preparing Stock Solutions	1 mM	4.8976 mL	24.4882 mL	48.9764 mL
		5 mM	0.9795 mL	4.8976 mL	9.7953 mL
		10 mM	0.4898 mL	2.4488 mL	4.8976 mL
Please refer to the solubility information to select the appropriate solvent.					
In Vivo	1. Add each solvent one by one: PBS Solubility: 7.14 mg/mL (34.97 mM); Clear solution; Need ultrasonic and warming and heat to 60°C				

BIOLOGICAL ACTIVITY

Description	(RS)-AMPA ((±)-AMPA) monohydrate is a glutamate analogue and a potent and selective excitatory neurotransmitter L-glutamic acid agonist. (RS)-AMPA monohydrate does not interfere with binding sites for kainic acid or NMDA receptors ^{[1][2]} .
In Vitro	(RS)-AMPA monohydrate (10 ⁻³ -10 ⁻⁴ M) causes depolarizations of cultured rat spinal and brainstem neurones. The depolarization by (RS)-AMPA monohydrate is clearly dose-dependent, although there is a great variability of effects between individual neurones. Application of (RS)-AMPA monohydrate at 10 ⁻⁵ M produces only small depolarizations (3-7 mV), whereas at 10 ⁻⁴ M, the amplitudes of the depolarizations ranged from 4 to 33 mV. (RS)-AMPA monohydrate also causes an increase of the discharge rate of spontaneously firing neurones or sometimes evoked a short burst of action potentials in silent cells. (RS)-AMPA monohydrate exerts its depolarizing effects by activating glutamate/quisqualate receptors without affecting NMDA receptors ^[1] . MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

- [1]. Höslü L, et al. Effects of the glutamate analogue AMPA and its interaction with antagonists on cultured rat spinal and brain stem neurones. *Neurosci Lett.* 1983 Mar 28;36(1):59-62.
- [2]. Sommer B, et al. Flip and flop: a cell-specific functional switch in glutamate-operated channels of the CNS. *Science.* 1990 Sep 28;249(4976):1580-5.
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Caution: Product has not been fully validated for medical applications. For research use only.

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