Levamisole

Cat. No.: HY-A0106

CAS No.: 14769-73-4

Molecular Formula: $C_{11}H_{12}N_2S$

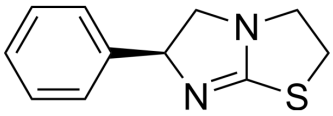
Molecular Weight: 204.29

Target: nAChR; Parasite

Pathway: Membrane Transporter/Ion Channel; Neuronal Signaling; Anti-infection

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 (489.50 mM; Need ultrasonic)

Preparing Stock Solutions	Mass / Solvent / Concentration	1 mg	5 mg	10 mg
	1 mM	4.8950 mL	24.4750 mL	48.9500 mL
	5 mM	0.9790 mL	4.8950 mL	9.7900 mL
	10 mM	0.4895 mL	2.4475 mL	4.8950 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 (12.24 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 2.5 mg/mL (12.24 mM); Clear solution
3. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.5 mg/mL (12.24 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Levamisole ((-)-Levamisole), an anthelmintic agent with immunomodulatory properties. Levamisole acts as a positive allosteric modulator (PAM) for the α3β2 (EC_{50}=300 μM) and α3β4 (EC_{50}=100 μM) subtype of nAChRs. Orally active[1][2].

In Vivo

(S)-(-)-Levamisole (Levamisole) (50 μg/ml and 200 μg/ml; p.o.; 30 days) prevents weight gain in mice that were fed a high fat diet[2].

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

CUSTOMER VALIDATION

- Environ Sci Pollut Res Int. 2022 Sep 16.
- Rapid Commun Mass Spectrom. 2022 Nov 16;e9430.
- bioRxiv. 2023 Oct 15.

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REFERENCES

[1]. Lewis JA, et al. Levamisole: A Positive Allosteric Modulator for the α3β4 Nicotinic Acetylcholine Receptors Prevents Weight Gain in the CD-1 Mice on a High Fat Diet. Curr Pharm Des. 2017;23(12):1869-1872.

[2]. Mehta KP, et al. Immunoregulatory treatment for minimal change nephrotic syndrome. Arch Dis Child. 1986;61(2):153-158.

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