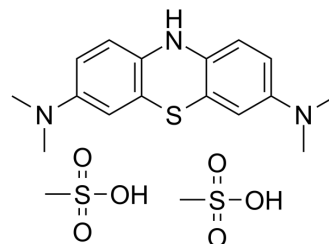


Leucomethylene blue Mesylate

Cat. No.:	HY-19948
CAS No.:	1236208-20-0
Molecular Formula:	C ₁₈ H ₂₇ N ₃ O ₆ S ₃
Molecular Weight:	477.62
Target:	Amyloid-β
Pathway:	Neuronal Signaling
Storage:	4°C, stored under nitrogen, away from moisture * In solvent : -80°C, 6 months; -20°C, 1 month (stored under nitrogen, away from moisture)



SOLVENT & SOLUBILITY

In Vitro	DMSO : 110 mg/mL (230.31 mM; Need ultrasonic)				
	H ₂ O : 12.5 mg/mL (26.17 mM; Need ultrasonic)				
		Solvent Concentration	Mass 1 mg	5 mg	10 mg
	Preparing Stock Solutions	1 mM	2.0937 mL	10.4686 mL	20.9371 mL
	5 mM	0.4187 mL	2.0937 mL	4.1874 mL	
	10 mM	0.2094 mL	1.0469 mL	2.0937 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: ≥ 7.5 mg/mL (15.70 mM); Clear solution 2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline) Solubility: ≥ 2.75 mg/mL (5.76 mM); Clear solution				

BIOLOGICAL ACTIVITY

Description	TRx0237 (Leucomethylene blue) Mesylate, an orally active second-generation tau protein aggregation inhibitor (K _i of 0.12 μM), could be used for the study of Alzheimer's Disease. TRx0237 (Leucomethylene blue) Mesylate is a common reduced form of Methylene Blue, Methylene Blue is a member of the thiazine class of dyes ^{[1][2][3]} .
IC₅₀ & Target	K _i : 0.12 μM (tau) ^[3] .
In Vitro	TRx0237 (Leucomethylene blue, 100 nM, 48 h) Mesylate not only decreases the tau and p-tau expression levels, but also reversed the promoting effects of Aβ ₂₅₋₃₅ on orexin A and adenosine A1R expression levels ^[2] . MCE has not independently confirmed the accuracy of these methods. They are for reference only. Western Blot Analysis ^[2]

Cell Line:	Human SH-SY5Y cell line.
Concentration:	100 nM.
Incubation Time:	48 h.
Result:	A β 25-35 and TRx 0237 co-treatment significantly reversed the promoting effects of A β 25-35 on tau, p-tau, orexin A and adenosine A1R expression.

CUSTOMER VALIDATION

- Bioorg Med Chem. 2018 Sep 1;26(16):4693-4705.
- Research Square Preprint. 2020 Dec.

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REFERENCES

- [1]. Gaudette NF, et al. Determination of methylene blue and leucomethylene blue in male and female Fischer 344 rat urine and B6C3F1 mouse urine. J Anal Toxicol. 2005 Jan-Feb;29(1):28-33.
- [2]. Zhenhua Liu, et al. Amyloid β and tau are involved in sleep disorder in Alzheimer's disease by orexin A and adenosine A(1) receptor. Int J Mol Med. 2019 Jan;43(1):435-442.
- [3]. Francesco Panza, et al. Tau aggregation inhibitors: the future of Alzheimer's pharmacotherapy? Expert Opin Pharmacother. 2016;17(4):457-61.

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

Tel: 609-228-6898

Fax: 609-228-5909

E-mail: tech@MedChemExpress.com

Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA