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Lieferung & Zahlungsart

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Zuschläge

- Mindermengenzuschlag
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Leucomethylene blue mesylate

Cat. No.: HY-19948

CAS No.: 1236208-20-0

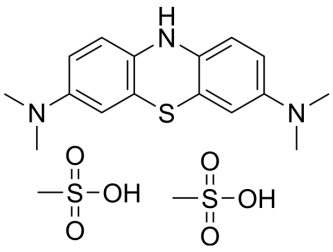
Molecular Formula: $C_{18}H_{27}N_3O_6S_3$

Molecular Weight: 477.62

Target: Amyloid-β

Pathway: Neuronal Signaling

Storage: 4°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

DMSO : 110 mg/mL (230.31 mM; Need ultrasonic)
H_2O : 83.33 mg/mL (174.47 mM; Need ultrasonic)

Preparing Stock Solutions

Solvent / Mass / Concentration	1 mg	5 mg	10 mg
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: PBS
   Solubility: 50 mg/mL (104.69 mM); Clear solution; Need ultrasonic
2. 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
3. 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

Leucomethylene blue (TRx0237) 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. 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].

IC_{50} & Target

Ki: 0.12 μM (tau)[3].

In Vitro

Leucomethylene blue (100 nM, 48 h) mesylate not only decreases the tau and p-tau expression levels, but also reverses the

promoting effects of Aβ25-35 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:	Aβ25-35 and TRx 0237 co-treatment significantly reversed the promoting effects of Aβ25-35 on tau, p-tau, orexin A and adenosine A1R expression.

CUSTOMER VALIDATION

- Cancers (Basel). 2022 Sep 19;14(18):4535.
- Bioorg Med Chem. 2018 Sep 1;26(16):4693-4705.
- Research Square Print. August 19th, 2022.
- Research Square Preprint. 2020 Dec.

See more customer validations on www.MedChemExpress.com

REFERENCES

[1]. Gaudette NF, et al. Determination of methylene blue and leucomethylene blue in male and female Fischer 344 rat urine andB6C3F1 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.

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