# PRODUCT INFORMATION

## TRx0237 (mesylate)

*Item No. 34307*

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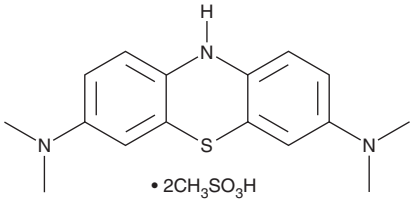
|---|---|
| **CAS Registry No.:** | 1236208-20-0 |
| **Formal Name:** | $N^3$,$N^3$,$N^7$,$N^7$-tetramethyl-10H-phenothiazine-3,7-diamine, dimethanesulfonate |
| **Synonyms:** | Hydromethylthionine, Leucomethylene Blue, Leukomethylthioninium dihydromesylate, LMTM |
| **MF:** | $C_{16}H_{19}N_3S \bullet 2CH_3SO_3H$ |
| **FW:** | 477.6 |
| **Purity:** | ≥95% |
| **UV/Vis.:** | $\lambda_{max}$: 237, 264, 656 nm |
| **Supplied as:** | A solid |
| **Storage:** | -20°C |
| **Stability:** | ≥4 years |




*Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.*

### Laboratory Procedures

TRx0237 (mesylate) is supplied as a solid. A stock solution may be made by dissolving the TRx0237 (mesylate) in the solvent of choice, which should be purged with an inert gas. TRx0237 (mesylate) is soluble in the organic solvent DMSO at a concentration of approximately 5 mg/ml.

TRx0237 (mesylate) is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, TRx0237 (mesylate) should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. TRx0237 (mesylate) has a solubility of approximately 0.2 mg/ml in a 1:4 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

### Description

TRx0237 is an inhibitor of tau aggregation.[1] It inhibits tau-tau binding ($IC_{50}$ = 238 µM) and tau aggregation in 3T6H cells expressing human tau ($EC_{50}$ = 0.19 µM). TRx0237 (5 and 15 mg/kg) increases hippocampal acetylcholine (ACh) and synaptophysin levels, as well as increases mitochondrial complex IV activity, decreases tau pathology, and reverses deficits in spatial learning in the L1 transgenic mouse model of Alzheimer's disease.[2]

### References


1. Harrington, C.R., Storey, J.M.D., Clunas, S., *et al.* Cellular models of aggregation-dependent template-directed proteolysis to characterize tau aggregation inhibitors for treatment of Alzheimer disease. *J. Biol. Chem.* **290(17)**, 10862-10875 (2015).
2. Riedel, G., Klein, J., Niewiadomska, G., *et al.* Mechanisms of anticholinesterase interference with tau aggregation inhibitor activity in a tau-transgenic mouse model. *Curr. Alzheimer Res.* **17(3)**, 285-296 (2020).





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