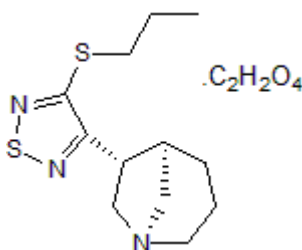


Product Name: PTAC oxalate **Catalog No.:** 4533 **Batch No.:** 1
CAS Number: 201939-40-4
IUPAC Name: (1*R*,5*R*,6*R*)-6-[4-(Propylthio)-1,2,5-thiadiazol-3-yl]-1-azabicyclo[3.2.1]octane oxalate

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: C₁₂H₁₉N₃S₂·C₂H₂O₄
Batch Molecular Weight: 359.46
Physical Appearance: White solid
Solubility: water to 100 mM
DMSO to 100 mM
ethanol to 100 mM
Storage: Desiccate at RT
Batch Molecular Structure:



2. ANALYTICAL DATA

TLC: R_f = 0.65 (Dichloromethane:Methanol:Ammonia soln. [90:9:1])
HPLC: Shows 100% purity
¹H NMR: Consistent with structure
Mass Spectrum: Consistent with structure
Optical Rotation: [α]_D = -5 (Concentration = 0.2, Solvent = Methanol)

Caution - Not Fully Tested • Research Use Only • Not For Human or Veterinary Use

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Description:

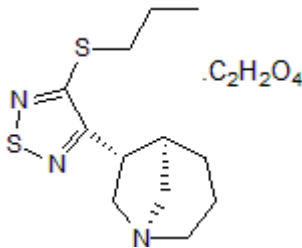
Muscarinic receptor ligand. Displays partial agonist activity at M₂ and M₄ receptors; exhibits antagonist effects at M₁, M₃ and M₅ receptors (K_i values are 2.8, 0.2, 0.6, 0.2 and 0.8 nM respectively). Displays selectivity for muscarinic receptors over a range of neurotransmitter receptors and ion channels. Inhibits firing rate of dopaminergic cells in the limbic ventral tegmental area after acute administration, without binding to dopamine receptors.

Physical and Chemical Properties:

Batch Molecular Formula: C₁₂H₁₉N₃S₂.C₂H₂O₄
 Batch Molecular Weight: 359.46
 Physical Appearance: White solid

Minimum Purity: >98%

Batch Molecular Structure:



Storage: Desiccate at RT

Solubility & Usage Info:

water to 100 mM
 DMSO to 100 mM
 ethanol to 100 mM

Stability and Solubility Advice:

Some solutions can be difficult to obtain and can be encouraged by rapid stirring, sonication or gentle warming (in a 45-60°C water bath).

Information concerning product stability, particularly in solution, has rarely been reported and in most cases we can only offer a general guide. Our standard recommendations are:

SOLIDS: Provided storage is as stated on the product label and the vial is kept tightly sealed, the product can be stored for up to 6 months from date of receipt.

SOLUTIONS: We recommend that stock solutions, once prepared, are stored aliquoted in tightly sealed vials at -20°C or below and used within 1 month. Wherever possible solutions should be made up and used on the same day.

References:

Bymaster et al (1998) Unexpected antipsychotic-like activity with the muscarinic receptor ligand (5*R*,6*R*)-6-(3-propylthio-1,2,5-thiadiazol-4-yl)-1-azabicyclo[3.2.1]octane. *Eur.J.Pharmacol.* **356** 109. PMID: 9774240.

Shannon et al (1999) Muscarinic receptor agonists, like dopamine receptor antagonist antipsychotics, inhibit conditioned avoidance response in rats. *J.Pharmacol.Exp.Ther.* **290** 901. PMID: 10411607.

Raedler et al (2007) Towards a muscarinic hypothesis of schizophrenia. *Mol.Psychiatry* **12** 232. PMID: 17146471.

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