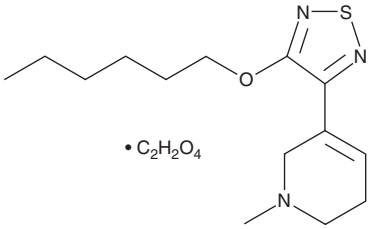
PRODUCT INFORMATION

Xanomeline (oxalate)

Item No. 10790

CAS Registry No.:	141064-23-5
Formal Name:	3-[4-(hexyloxy)-1,2,5-thiadiazol-3-yl]-1,2,5,6-tetrahydro-1-methyl-pyridine, ethanedioate
Synonyms:	Lumeron, LY246708, Memcor
MF:	$C_{14}H_{23}N_3OS \bullet C_2H_2O_4$
FW:	371.5
Purity:	≥95%
UV/Vis.:	λ_{max}: 223, 296 nm
Supplied as:	A crystalline 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

Xanomeline (oxalate) is supplied as a crystalline solid. A stock solution may be made by dissolving the xanomeline (oxalate) in the solvent of choice, which should be purged with an inert gas. Xanomeline (oxalate) is soluble in dimethyl formamide (DMF). The solubility of xanomeline oxalate in DMF is approximately 1.6 mg/ml.

Xanomeline (oxalate) is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, xanomeline (oxalate) should first be dissolved in DMF and then diluted with the aqueous buffer of choice. Xanomeline (oxalate) has a solubility of approximately 0.1 mg/ml in a 1:9 solution of DMF:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

Muscarinic receptors are G protein-coupled acetylcholine receptors that play diverse roles. Xanomeline (oxalate) is a potent agonist of muscarinic acetylcholine receptors (EC_{50} values are 0.3, 92.5, 5, 52, and 42 nM for M_1, M_2, M_3, M_4, and M_5, respectively).[1] It has antipsychotic-like activities in rats and *Cebus* monkeys.[2,3] M_1 selective agonists, like xanomeline oxalate, enhance memory function and has utility in treating Alzheimer's Disease.[4]

References

1. Heinrich, J. N., Butera, J. A., Carrick, T., *et al.* Pharmacological comparison of muscarinic ligands: Historical *versus* more recent muscarinic M_1-preferring receptor agonists. *Eur. J. Pharmacol.* **605**, 53-6 (2009).
2. Stanhope, K. J., Mirza, N. R., Dickerdike, M. J., *et al.* The muscarinic receptor agonist xanomeline has an antipsychotic-like profile in the rat. *J. Pharmacol. Exp. Ther.* **299(2)**, 782-92 (200).
3. Anderson, M. B., Fink-Jensen, A., Peacock, L., *et al.* The muscarinic M_1/M_4 receptor agonist xanomeline exhibits antipsychotic-like activity in *Cebus apella* monkeys. *Neuropsychopharmacology* **28(6)**, 1168-75 (2003).
4. Messer, W. S., Jr. The utility of muscarinic agonists in the treatment of Alzheimer's disease. *J. Mol. Neurosci.* **19(1-2)**, 187-93 (2002).

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