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DATASHEET

VU 0357017 hydrochloride

Product overview

Name	VU 0357017 hydrochloride
Cat No	HB1498
Biological action	Agonist
Purity	>98%
Description	Potent, selective M_1 receptor allosteric agonist

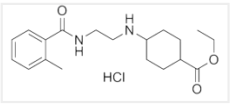
Biological Data

Biological description	Potent and selective M_1 muscarinic receptor allosteric agonist (EC_{50} = 198 nM). Binds to the orthosteric ACh site at high concentrations to act as an antagonist. Reverses contextual fear conditioning deficits. Shows cognitive enhancing actions. Blood-brain barrier permeable.

Solubility & Handling

Storage instructions	+4°C
Solubility overview	Soluble in water (25mM) or DMSO (5mM)
Important	This product is for RESEARCH USE ONLY and is not intended for therapeutic or diagnostic use. Not for human or veterinary use.

Chemical Data

Chemical name	4-[[2-[(2-Methylbenzoyl)amino]ethyl]amino]-1-piperidinecarboxylic acid ethyl ester hydrochloride
Molecular Weight	369.89
Chemical structure	
Molecular Formula	$C_{18}H_{27}N_3O_3.HCl$
CAS Number	1135242-13-5
PubChem identifier	25010775
SMILES	CC1=CC=CC=C1C(NCCNC2CCN(C(OCC)=O)CC2)=O.Cl
InChiKey	XKJQVUIXSBOCPP-UHFFFAOYSA-N

References

Discovery and characterization of novel subtype-selective allosteric agonists for the investigation of M(1) receptor function in the central nervous system.

Lebois EP *et al* (2010) ACS Chem Neurosci 1(2)
PubMedID 21961051

Novel allosteric agonists of M1 muscarinic acetylcholine receptors induce brain region-specific responses that correspond with behavioral effects in animal models.

Digby GJ *et al* (2012) J Neurosci 32(25)

PubMedID 22723693

Further exploration of M_1 allosteric agonists: subtle structural changes abolish M_1 allosteric agonism and result in pan-mAChR orthosteric antagonism.

Sheffler DJ *et al* (2013) Bioorg Med Chem Lett 23(1)
PubMedID 23200253