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DATASHEET

uPSEM792 hydrochloride

Product overview

Name	uPSEM792 hydrochloride
Cat No	HB8542
Biological action	Agonist
Purity	>99%
Description	Ultrapotent PSEM agonist for PSAM^4-GlyR and PSAM^4-5HT3. Brain penetrant.

Biological Data

Biological description

Overview

Ultrapotent PSEM agonist for PSAM^4-GlyR and PSAM^4-5HT3 (K_i values are 0.7 nM and 10,000-fold agonist selectivity for PSAM^4-GlyR over α-7-GlyR, α7-5HT3R and 5-HT3R.

uPSEM792 is a very weak agonist at α4β2 nAChR and shows 230-fold selectivity for PSAM^4-GlyR over α4β2 nAChR.

It retains the potency of varenicline for PSAM^4-GlyR with enhanced chemogenetic selectivity.

It does not act as a P-glycoprotein pump (PgP) substrate.

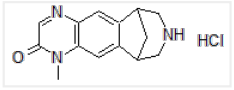
Uses and applications

It strongly suppresses layer 2/3 cortical neurons expressing PSAM^4-GlyR in brain slices at low concentrations (ranging from 1-15 nM).

Solubility & Handling

Storage instructions	-20°C
Solubility overview	Soluble in water (100 mM)
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	1-Methyl-7,8,9,10-tetrahydro-1H-6,10-methanoazepino[4,5-g]quinoxalin-2(6H)-one hydrochloride
Molecular Weight	277.75
Chemical structure	
Molecular Formula	$C_{14}H_{15}N_3O \cdot HCl$
CAS Number	2341841-08-3
PubChem identifier	138991792
SMILES	CN1C2=C(C=C3C4CC(C3=C2)CNC4)N=CC1=O.Cl
InChi	InChI=1S/C14H15N3O.ClH/c1-17-13-4-11-9-2-8(5-15-6-9)10(11)3-12(13)16-7-14(17)18;/h3-4,7-9,15H,2,5-6H2,1H3;1H

InChiKey	CDHPEJUYEXNGCV-UHFFFAOYSA-N
Appearance	Yellow solid
Licensing details	Sold under license from the Howard Hughes Medical Institute, Janelia Research Campus. For scientific research use only. This product may not be used to research, develop, make, use, offer to sell, sell, or import any products for human therapeutic uses.

References

Ultrapotent chemogenetics for research and potential clinical applications.

Magnus CJ *et al* (2019) Science 364(6436)

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