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## DATASHEET

### uPSEM792 hydrochloride

## Product overview

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

## Biological Data

### Biological description

#### Overview

Ultrapotent PSEM agonist for PSAM<sup>4</sup>-GlyR and PSAM<sup>4</sup>-5HT3 ( $K_i$  values are 0.7 nM and 10,000-fold agonist selectivity for PSAM<sup>4</sup>-GlyR over  $\alpha$ -7-GlyR,  $\alpha$ 7-5HT3R and 5-HT3R.

uPSEM792 is a very weak agonist at  $\alpha$ 4 $\beta$ 2 nAChR and shows 230-fold selectivity for PSAM<sup>4</sup>-GlyR over  $\alpha$ 4 $\beta$ 2 nAChR.

It retains the potency of varenicline for PSAM<sup>4</sup>-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<sup>4</sup>-GlyR in brain slices at low concentrations (ranging from 1-15 nM).

## Solubility & Handling

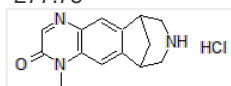
### Storage instructions Solubility overview Important

-20 °C  
Soluble in water (100 mM)  
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 Molecular Weight Chemical structure

1-Methyl-7,8,9,10-tetrahydro-1H-6,10-methanoazepino[4,5-g]quinoxalin-2(6H)-one hydrochloride  
277.75



### Molecular Formula CAS Number PubChem identifier SMILES InChi

$C_{14}H_{15}N_3O \cdot HCl$   
2341841-08-3  
138991792  
CN1C2=C(C=C3C4CC(C3=C2)CNC4)N=CC1=O.Cl  
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

|                   |                                                                                                                                                                                                                                                               |
|-------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Chemical name     | 1-Methyl-7,8,9,10-tetrahydro-1H-6,10-methanoazepino[4,5-g]quinoxalin-2(6H)-one hydrochloride                                                                                                                                                                  |
| 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. |

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## References

**Ultrapotent chemogenetics for research and potential clinical applications.**

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

**PubMedID** [30872534](#)

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