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# DATASHEET

uPSEM792 hydrochloride

## Product overview

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|---|---|
| **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

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| **Solubility overview** | Soluble in water (100 mM) |
| **Storage instructions** | -20°C |
| **Storage of solutions** | Prepare and use solutions on the same day if possible. Store solutions at -20°C for up to one month if storage is required. Equilibrate to RT and ensure the solution is precipitate free before use. |
| **Shipping Conditions** | Stable for ambient temperature shipping. Follow storage instructions on receipt. |
| **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

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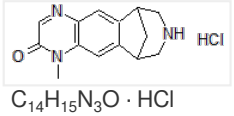
| **Chemical name** | 1-Methyl-7,8,9,10-tetrahydro-1H-6,10-methanoazepino[4,5-g]quinoxalin-2(6H)-one hydrochloride |
| **Molecular Weight** | 277.75 |
| **Chemical structure** |  |
| **Molecular Formula** | $C_{14}H_{15}N_3O \cdot HCl$ |
| **CAS Number** | 2341841-08-3 |
| **PubChem identifier** | 138991792 |

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|---|---|
| **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)

**PubMedID** 30872534