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## DATASHEET

uPSEM817 tartrate

### Product overview

<b>Name</b>	uPSEM817 tartrate
<b>Cat No</b>	HB8620
<b>Description</b>	Selective, ultrapotent PSEM agonist for PSAM <sup>4</sup> -GlyR and PSAM <sup>4</sup> -5HT3. Brain penetrant.
<b>Biological action</b>	Agonist
<b>Purity</b>	>99%

### Biological Data

#### Biological description

#### Overview

Selective, ultrapotent PSEM agonist for PSAM<sup>4</sup>-GlyR and PSAM<sup>4</sup>-5HT3 (K<sub>i</sub> values are 0.15 nM and EC<sub>50</sub> = 0.3 nM at PSAM<sup>4</sup>-GlyR) which can be used for targeted control of brain activity in rodent and primate models.

It has excellent selectivity with 5000- to 10,000-fold selectivity for PSAM<sup>4</sup>-GlyR over α-7-GlyR, α7-5HT3R and 5-HT3R. It also does not show evident α4β2 nAChR agonism up to 30 μM.

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

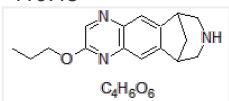
#### Uses and applications

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

<b>Storage instructions</b>	-20 °C
<b>Storage buffer</b>	Soluble in DMSO (100 mM), and in water (50 mM, gentle warming)
<b>Important</b>	This product is for RESEARCH USE ONLY and is not intended for therapeutic or diagnostic use. Not for human or veterinary use

### Chemical Data

<b>Chemical name</b>	2-Propoxy-7,8,9,10-tetrahydro-6H-6,10-methanoazepino[4,5-g]quinoxaline L-tartrate
<b>Molecular Weight</b>	419.43
<b>Chemical structure</b>	 C <sub>4</sub> H <sub>6</sub> O <sub>6</sub>
<b>Molecular Formula</b>	C <sub>16</sub> H <sub>19</sub> N <sub>3</sub> O <sub>3</sub> .C <sub>4</sub> H <sub>6</sub> O <sub>6</sub>
<b>PubChem identifier</b>	138991793
<b>SMILES</b>	CCOC1=NC2=C(N=C1)C=C(C3=C2)C4CNCC3C4.O[C@@H](C(O)=O)[C@@H](O)C(O)=O
<b>Source</b>	Synthetic
<b>InChi</b>	InChI=1S/C16H19N3O.C4H6O6/c1-2-3-20-16-9-18-14-5-12-10-4-11(8-17-7-10)13(12)6-15(14)19-16;5-1(3(7)8)2(6)4(9)10/h5-6,9-11,17H,2-4,7-8H2,1H3;1-2,5-6H,(H,7,8)(H,9,10)/t;1-,2-/m.1/s1
<b>InChiKey</b>	ATMVSWRWVDFOP-LREBCSMRSA-N

**Appearance**  
**Licensing details**

Off-white solid

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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