

Certificate of Analysis

www.tocris.com

Product Name: uPSEM 792 hydrochloride

Catalog No.: 6865

Batch No.: 2

CAS Number: 2341841-08-3

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

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: C₁₄H₁₅N₃O.HCl.¼H₂O

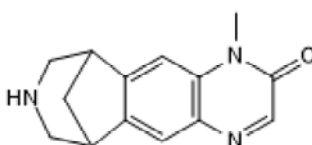
Batch Molecular Weight: 282.25

Physical Appearance: Pale yellow solid

Solubility: water to 100 mM

Storage: Store at -20°C

Batch Molecular Structure:



HCl

2. ANALYTICAL DATA

HPLC: Shows 99.6% purity

¹H NMR: Consistent with structure

Mass Spectrum: Consistent with structure

Microanalysis:

	Carbon	Hydrogen	Nitrogen
Theoretical	59.57	5.89	14.89
Found	59.34	6.08	14.88

Caution - Not Fully Tested • Research Use Only • Not For Human or Veterinary Use

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Description:

Ultrapotent PSEM (uPSEM) agonist for PSAM⁴-GlyR and PSAM⁴-5HT₃ (K_i = 0.7 nM for PSAM⁴-GlyR and <10 nM for PSAM⁴-5HT₃). Exhibits >10,000-fold agonist selectivity for PSAM⁴-GlyR over α7-GlyR, α7-5HT₃, and 5HT₃-R, and 230-fold selectivity over α4β2 nAChR. Also weak partial agonist (~10 %) at α4β2 nAChR. Retains the potency of varenicline (Cat.No. 3754) for PSAM⁴-GlyR with enhanced chemogenetic selectivity. Does not act as a substrate for P-glycoprotein pumps. Silences neurons *in vivo*. Brain-penetrant. Please see product datasheet on www.tocris.com for full description.

Physical and Chemical Properties:

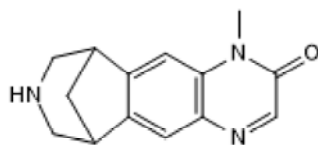
Batch Molecular Formula: C₁₄H₁₅N₃O.HCl.¼H₂O

Batch Molecular Weight: 282.25

Physical Appearance: Pale yellow solid

Minimum Purity: ≥98%

Batch Molecular Structure:



HCl

References:

Magnus et al (2019) Ultrapotent chemogenetics for research and potential clinical applications. Science doi: 10.1126/science. PMID: 30872534.

Storage: Store at -20°C

CAUTION - This product is light sensitive and we recommend that the solid material and any solutions obtained are protected from exposure to light.

Solubility & Usage Info:

water to 100 mM

It is recommended that a stock solution is made for *in vivo* work.

Stability and Solubility Advice:

Some solutions can be difficult to obtain and can be encouraged by rapid stirring, sonication or gentle warming (in a 45-60°C water bath).

Information concerning product stability, particularly in solution, has rarely been reported and in most cases we can only offer a general guide. Our standard recommendations are:

SOLIDS: Provided storage is as stated on the product label and the vial is kept tightly sealed, the product can be stored for up to 6 months from date of receipt.

SOLUTIONS: We recommend that stock solutions, once prepared, are stored aliquoted in tightly sealed vials at -20°C or below and used within 1 month. Wherever possible solutions should be made up and used on the same day.

Licensing Information:

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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