Certificate of Analysis

www.tocris.com

uPSEM 792 hydrochloride Product Name:

CAS Number: 2341841-08-3 IUPAC Name:

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

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: Batch Molecular Weight: Physical Appearance: Solubility: Storage: **Batch Molecular Structure:**

C₁₄H₁₅N₃O.HCl.¹/₄H₂O 282.25 Pale yellow solid water to 100 mM Store at -20°C

ΗN

HCI

2. ANALYTICAL DATA

HPLC: ¹H NMR: Mass Spectrum: Microanalysis:

Shows 99.0% purity Consistent with structure Consistent with structure Carbon Hydrogen Nitrogen Theoretical 59.57 5.89 14.89 Found 59.34 14.88 6.08

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

bio-techne.com	North America	China	Europe Middle East Africa	Rest of World
info@bio-techne.com techsupport@bio-techne.com	Tel: (800) 343 7475	info.cn@bio-techne.com Tel: +86 (21) 52380373	Tel: +44 (0)1235 529449	www.tocris.com/distributors Tel:+1 612 379 2956



Print Date: Apr 24th 2025

Catalog No.: 6865 Batch No.: 2

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Batch No.: 2

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Product Name: uPSEM 792 hydrochloride

CAS Number: 2341841-08-3

IUPAC Name:

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

Description:

uPSEM 792 hydrochloride is an 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 α 7-GlyR, α 7-5HT3, and 5HT3-R, and 230-fold selectivity over α 4 β 2 nAChR. Also weak partial agonist (~10 %) at α 4 β 2 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. Brainpenetrant. Please see product specific page on www.tocris.com for full description.

Physical and Chemical Properties:

Batch Molecular Formula: C₁₄H₁₅N₃O.HCl.¹/₄H₂O Batch Molecular Weight: 282.25 Physical Appearance: Pale yellow solid

Minimum Purity: ≥98%

Batch Molecular Structure:



HCI

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.

Catalog No.: 6865

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. *Unless contradicted by product-specific protocols or instructions, our standard recommendations apply:

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.

References:

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

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info@bio-techne.com techsupport@bio-techne.com	Tel: (800) 343 7475	info.cn@bio-techne.com Tel: +86 (21) 52380373	Tel: +44 (0)1235 529449	www.tocris.com/distributors Tel:+1 612 379 2956