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Print Date: Aug 12th 2020

Certificate of Analysis

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Product Name: **uPSEM 817 tartrate** **Catalog No.: 6866** **Batch No.: 2**

CAS Number: 2341833-14-3

IUPAC Name: 2-Propoxy-7,8,9,10-tetrahydro-6*H*-6,10-methanoazepino[4,5-*g*]quinoxaline L-tartrate

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: $C_{16}H_{19}N_3O.C_4H_6O_6.½H_2O$

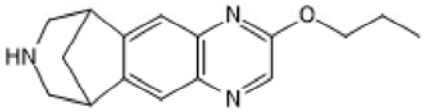
Batch Molecular Weight: 428.44

Physical Appearance: Off White solid

Solubility: DMSO to 100 mM
water to 20 mM

Storage: Store at -20°C

Batch Molecular Structure:



$C_4H_6O_6$

2. ANALYTICAL DATA

HPLC: Shows 99.2% purity

^{1}H NMR: Consistent with structure

Mass Spectrum: Consistent with structure

Microanalysis:

	Carbon	Hydrogen	Nitrogen
Theoretical	56.07	6.12	9.81
Found	56.12	6.01	9.9

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Product Information

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Description:

Selective ultrapotent PSEM (uPSEM) agonist for $\alpha7^{L131G,Q139L,Y217F}$-GlyR (PSAM^4-GlyR) and PSAM^4-5-HT_3 chimeric ion channel agonist (EC_{50} values are 0.3 and 0.5 nM, respectively). Suppresses firing of layer 2/3 cortical neurons expressing PSAM^4-GlyR in brain slices. Increases contralateral rotation in mice expressing PSAM^4-GlyR unilaterally in the substantia nigra reticulata (LED 0.1 mg/kg).

Physical and Chemical Properties:

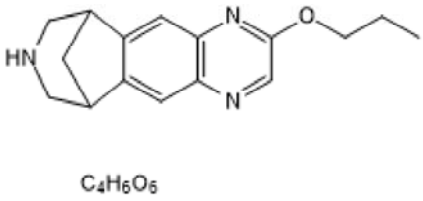
Batch Molecular Formula: $C_{16}H_{19}N_3O.C_4H_6O_6.½H_2O$

Batch Molecular Weight: 428.44

Physical Appearance: Off White solid

Minimum Purity: ≥98%

Batch Molecular Structure:



$C_4H_6O_6$

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:

DMSO to 100 mM
water to 20 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.

References:

Magnus *et al* (2019) Ultrapotent chemogenetics for research and potential clinical applications. Science ***364***. PMID: 30872534.