

**Product Name:** JHU 37160

**Catalog No.:** 7198

**Batch No.:** 1

CAS Number: 2369979-68-8

IUPAC Name: 8-Chloro-11-(4-ethylpiperazin-1-yl)-4-fluoro-5H-dibenzo[b,e][1,4]diazepine

**1. PHYSICAL AND CHEMICAL PROPERTIES**

**Batch Molecular Formula:** C<sub>19</sub>H<sub>20</sub>ClFN<sub>4</sub>·¼H<sub>2</sub>O

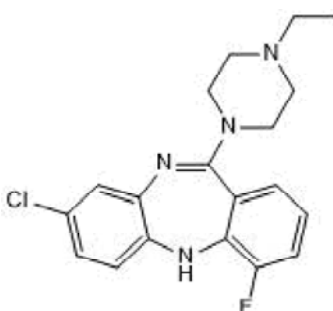
**Batch Molecular Weight:** 363.35

**Physical Appearance:** Yellow solid

**Solubility:** DMSO to 50 mM

**Storage:** Store at RT

**Batch Molecular Structure:**



**2. ANALYTICAL DATA**

**HPLC:** Shows 99.8% purity

**<sup>1</sup>H NMR:** Consistent with structure

**Mass Spectrum:** Consistent with structure

**Microanalysis:**

	Carbon	Hydrogen	Nitrogen
Theoretical	62.81	5.69	15.42
Found	62.75	5.62	15.71

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

**bio-techne.com**

info@bio-techne.com

techsupport@bio-techne.com

**North America**

Tel: (800) 343 7475

**China**

info.cn@bio-techne.com

Tel: +86 (21) 52380373

**Europe Middle East Africa**

Tel: +44 (0)1235 529449

**Rest of World**

[www.tocris.com/distributors](http://www.tocris.com/distributors)

Tel: +1 612 379 2956

**Product Name:** JHU 37160

**Catalog No.:** 7198

**1**

CAS Number: 2369979-68-8

IUPAC Name: 8-Chloro-11-(4-ethylpiperazin-1-yl)-4-fluoro-5H-dibenzo[b,e][1,4]diazepine

**Description:**

JHU 37160 is a high affinity and highly potent activator of hM<sub>3</sub>D<sub>q</sub> and hM<sub>4</sub>D<sub>i</sub> DREADDs (K<sub>i</sub> values are 1.9 nM and 3.6 nM for hM<sub>3</sub>D<sub>q</sub> and hM<sub>4</sub>D<sub>i</sub> in vitro, respectively; EC<sub>50</sub> values are 0.2 nM and 18.5 nM for hM<sub>4</sub>D<sub>i</sub> and hM<sub>3</sub>D<sub>q</sub> in vitro, respectively). Displays approximately 25-fold higher affinity for hM<sub>4</sub>D<sub>i</sub> compared to DREADD agonist 21 (Cat. No. 5548). Selectively displaces [<sup>3</sup>H] clozapine from DREADDs in vivo, but not from other clozapine binding sites. Inhibits locomotor activity in mice expressing hM<sub>3</sub>D<sub>q</sub> and hM<sub>4</sub>D<sub>i</sub> in D<sub>1</sub>-expressing neurons, and increases hM<sub>3</sub>D<sub>q</sub>-stimulated locomotion in rats expressing hM<sub>3</sub>D<sub>q</sub> in TH-expressing neurons. Brain penetrant in m... Please see product specific page on [www.tocris.com](http://www.tocris.com) for full description.

**Physical and Chemical Properties:**

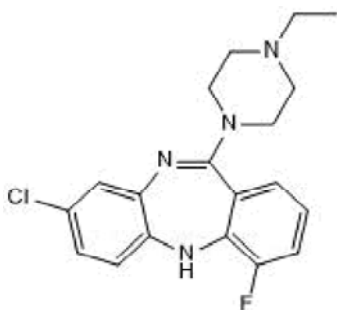
Batch Molecular Formula: C<sub>19</sub>H<sub>20</sub>ClFN<sub>4</sub>·¼H<sub>2</sub>O

Batch Molecular Weight: 363.35

Physical Appearance: Yellow solid

**Minimum Purity:** ≥98%

**Batch Molecular Structure:**



**References:**

**Bonaventura et al** (2019) High-potency ligands for DREADD imaging and activation in rodents and monkeys. *Nat. Commun.* **10** 4627. PMID: 31604917.

**Storage:** Store at RT

**Solubility & Usage Info:**

DMSO to 50 mM

**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.

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

**bio-techne.com**

[info@bio-techne.com](mailto:info@bio-techne.com)

[techsupport@bio-techne.com](mailto:techsupport@bio-techne.com)

**North America**

Tel: (800) 343 7475

**China**

[info.cn@bio-techne.com](mailto:info.cn@bio-techne.com)

Tel: +86 (21) 52380373

**Europe Middle East Africa**

Tel: +44 (0)1235 529449

**Rest of World**

[www.tocris.com/distributors](http://www.tocris.com/distributors)

Tel: +1 612 379 2956