

**Product Name:** CAF 382

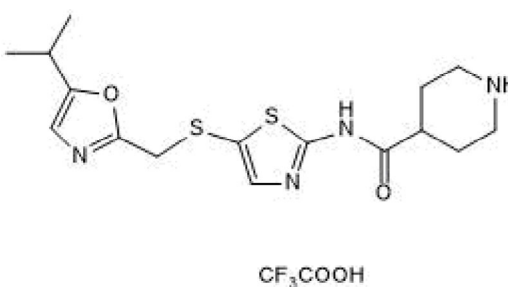
**Catalog No.:** 8105

**Batch No.:** 1

**IUPAC Name:** N-[5-[(5-Propan-2-yl-1,3-oxazol-2-yl)methylsulfanyl]-1,3-thiazol-2-yl]piperidine-4-carboxamide trifluoroacetate

**1. PHYSICAL AND CHEMICAL PROPERTIES**

**Batch Molecular Formula:** C<sub>16</sub>H<sub>22</sub>N<sub>4</sub>O<sub>2</sub>S<sub>2</sub>.CF<sub>3</sub>CO<sub>2</sub>H.  
**Batch Molecular Weight:** 480.52  
**Physical Appearance:** Off White solid  
**Solubility:** DMSO to 100 mM  
 ethanol to 20 mM with gentle warming  
**Storage:** Store at -20°C  
**Batch Molecular Structure:**



**2. ANALYTICAL DATA**

**HPLC:** Shows 98.1% purity  
**<sup>1</sup>H NMR:** Consistent with structure  
**Mass Spectrum:** Consistent with structure

**Microanalysis:**

	Carbon	Hydrogen	Nitrogen
Theoretical	44.99	4.82	11.66
Found	45.19	4.78	11.57

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

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**Description:**

CAF 382 is potent and selective CDKL5 (cyclin-dependent kinase-like 5) inhibitor (IC<sub>50</sub> = 10 nM). Exhibits nearly 100-fold selectivity for CDKL5 over CDKL2, low inhibition for CDKL3 and CDKL4 (IC<sub>50</sub> = 2.1-2.7 μM), and no inhibition for CDKL1. CAF 382 lacks GSK3β activity. It causes a significant reduction in pSer222 EB2 at 5 nM without a change in total EB2 levels in rat primary cortical neuron cultures. CAF 382 is an analog of SNS 032 (Cat. No. 4075).

**Physical and Chemical Properties:**

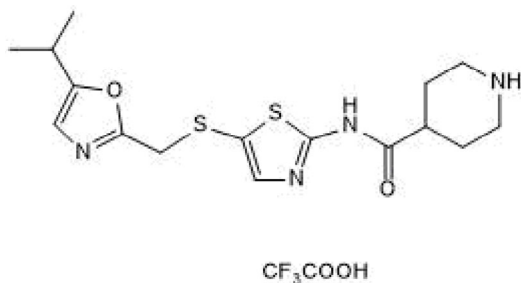
Batch Molecular Formula: C<sub>16</sub>H<sub>22</sub>N<sub>4</sub>O<sub>2</sub>S<sub>2</sub>.CF<sub>3</sub>CO<sub>2</sub>H.

Batch Molecular Weight: 480.52

Physical Appearance: Off White solid

**Minimum Purity:** ≥98%

**Batch Molecular Structure:**



**References:**

**Castano et al** (2023) Discovery and characterization of a specific inhibitor of serine-threonine kinase cyclin-dependent kinaselike 5 (CDKL5) demonstrates role in hippocampal CA1 physiology. *Elife* **12** e88206. PMID: 37490324 .

**Storage:** Store at -20°C

**Solubility & Usage Info:**

DMSO to 100 mM

ethanol to 20 mM with gentle warming

**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:**

This probe is supplied in conjunction with the Structural Genomics Consortium. For further characterization details, please visit the SGC-CAF382-1 probe summary on the SGC website.

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