

Certificate of Analysis

Product Name: TPPU

Catalog No.: 5918

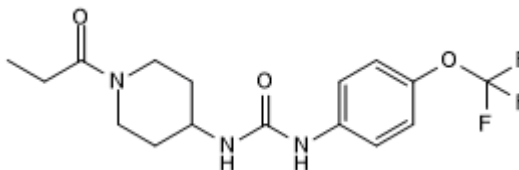
Batch No.: 1

CAS Number: 1222780-33-7

IUPAC Name: *N*-[1-(1-Oxopropyl)-4-piperidinyl]-*N*'-[4-(trifluoromethoxy)phenyl]urea

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: C₁₆H₂₀F₃N₃O₃
Batch Molecular Weight: 359.34
Physical Appearance: White solid
Solubility: DMSO to 100 mM
 ethanol to 50 mM
Storage: Store at +4°C
Batch Molecular Structure:



2. ANALYTICAL DATA

HPLC: Shows >99.1% purity
¹H NMR: Consistent with structure
Mass Spectrum: Consistent with structure
Microanalysis:

	Carbon	Hydrogen	Nitrogen
Theoretical	53.48	5.61	11.69
Found	53.4	5.48	11.61

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

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Description:

Potent soluble epoxide hydrolase (sEH) inhibitor (IC₅₀ values are 1.1 and 2.1 nM for murine and human receptor, respectively). Inhibits MAPK and NF-κB signaling, as well as reducing ER stress and cell death in models of pancreatitis. Exhibits antidepressant effects in a social defeat stress model. Orally bioavailable and brain penetrant.

Physical and Chemical Properties:

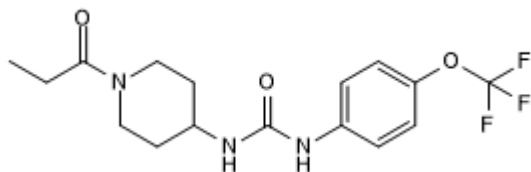
Batch Molecular Formula: C₁₆H₂₀F₃N₃O₃

Batch Molecular Weight: 359.34

Physical Appearance: White solid

Minimum Purity: >98%

Batch Molecular Structure:



Storage: Store at +4°C

Solubility & Usage Info:

DMSO to 100 mM
ethanol 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.

References:

Ren et al (2016) Gene deficiency and pharmacological inhibition of soluble epoxide hydrolase confers resilience to repeated social defeat stress. *Proc.Natl.Acad.Sci.U.S.A.* **113** E1944. PMID: 26976569.

Bettaieb et al (2015) Soluble epoxide hydrolase pharmacological inhibition ameliorates experimental acute pancreatitis in mice. *Mol.Pharmacol.* **88** 281. PMID: 25993999.

Rose et al (2010) 1-Aryl-3-(1-acylpiperidin-4-yl)urea inhibitors of human and murine soluble epoxide hydrolase: structure-activity relationships, pharmacokinetics, and reduction of inflammatory pain. *J.Med.Chem.* **53** 7067. PMID: 20812725.

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