

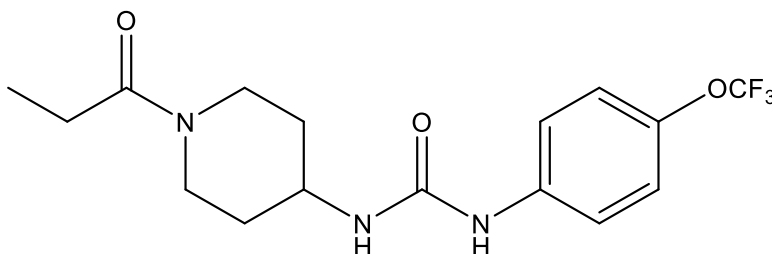
Catalog # 10-3451

TPPU

CAS# 1222780-33-7

Lot # E108423

N-[1-(1-Oxopropyl)-4-piperidiny]-N'-[4-trifluoromethoxy]phenyl]urea



TPPU is a potent and selective inhibitor of both murine and human soluble epoxide hydrolase, IC_{50} =2.8 and 3.7 nM respectively.¹ It alleviated blood brain barrier damage and attenuated neuronal injury in a mouse intracerebral hemorrhage model² and displays neuroprotective effects in ischemic injury³. It reduces neuroinflammation in a mouse model of Alzheimer's disease.⁴ It improves insulin resistance and reduced hypertension in mouse models.⁵ Cell permeable and active *in vivo*.

- 1) 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
- 2) Tian *et al.* (2021), *Soluble epoxide hydrolase inhibitor attenuates BBB disruption and neuroinflammation after intracerebral hemorrhage in mice*; Neurochem. Int. **150** 105197
- 3) Yi *et al.* (2021), *1-Trifluoromethoxyphenyl-3-(1-propionylpiperidin-4-yl) Urea Exerts Neuro-Protective Effects Against Ischemic Injury via Suppressing JNK/p38 MAPK-Mediated Mitochondrial Apoptosis Pathway*; J. Stroke Cerebrovasc. Dis. **30** 105957
- 4) Ghosh *et al.* (2020), *An epoxide hydrolase inhibitor reduces neuroinflammation in a mouse model of Alzheimer's disease*; Sci. Transl. Med. **12** eabb1206
- 5) Luo *et al.* (2021), *Inhibition of soluble epoxide hydrolase alleviates insulin resistance and hypertension via downregulation of SGLT2 in the mouse kidney*; J. Biol. Chem. **296** 100667

PHYSICAL DATA

Molecular Weight:	359.35
Molecular Formula:	C ₁₆ H ₂₀ F ₃ N ₃ O ₃
Purity:	>98% by HPLC
	NMR: (Conforms)
Solubility:	DMSO (40 mg/ml)
Physical Description:	White to off-white solid
Storage and Stability:	Store as supplied desiccated at -20°C for up to 2 years from the date of purchase. Solutions in DMSO may be stored at -20°C for up to 3 months.

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