

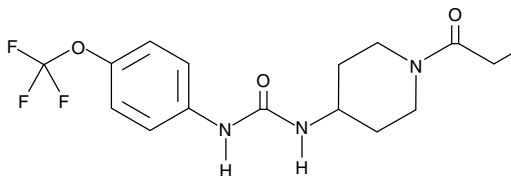
Product Information



TPPU

Item No. 11120

CAS Registry No.: 1222780-33-7
Formal Name: N-[1-(1-oxopropyl)-4-piperidyl]-N'-[4-(trifluoromethoxy)phenyl]-urea
MF: C₁₆H₂₀F₃N₃O₃
FW: 359.3
Purity: ≥98%
Stability: ≥2 years at -20°C
Supplied as: A crystalline solid
UV/Vis.: λ_{max}: 241 nm



Laboratory Procedures

For long term storage, we suggest that TPPU be stored as supplied at -20°C. It should be stable for at least two years.

TPPU is supplied as a crystalline solid. A stock solution may be made by dissolving the TPPU in the solvent of choice. TPPU is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF), which should be purged with an inert gas. The solubility of TPPU in these solvents is approximately 5, 12.5, and 15 mg/ml, respectively.

TPPU is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, TPPU should first be dissolved in DMF and then diluted with the aqueous buffer of choice. TPPU has a solubility of approximately 0.1 mg/ml in a 1:9 solution of DMF:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Soluble epoxide hydrolase (sEH) converts epoxides to their corresponding diols. Inhibitors of sEH have anti-inflammatory, anti-hypertensive, neuroprotective, and cardioprotective effects.^{1,2} TPPU is a potent inhibitor of both human and mouse sEH (IC₅₀ = 3.7 and 2.8 nM, respectively).³ The pharmacokinetics of this compound are dramatically superior to those of the 1-adamantylurea based inhibitors, like AUDA.^{3,4}

References

- Schmelzer, K.R., Kubala, L., Newman, J.W., *et al.* Soluble epoxide hydrolase is a therapeutic target for acute inflammation. *Proc. Natl. Acad. Sci. USA* **102**(28), 9772-9777 (2005).
- Yu, Z., Xu, F., Huse, L.M., *et al.* Soluble epoxide hydrolase regulates hydrolysis of vasoactive epoxyeicosatrienoic acids. *Circ. Res.* **87**, 992-998 (2000).
- Rose, T.E., Morisseau, C., Liu, J.-Y., *et al.* 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.* (2010).
- Tsai, H.-J., Hwang, S.H., Morisseau, C., *et al.* Pharmacokinetic screening of soluble epoxide hydrolase inhibitors in dogs. *Eur. J. Pharm. Sci.* **40**(3), 222-238 (2010).

Related Products

For a list of related products please visit: www.caymanchem.com/catalog/11120

WARNING: THIS PRODUCT IS FOR LABORATORY RESEARCH ONLY; NOT FOR ADMINISTRATION TO HUMANS. NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA

This material should be considered hazardous until information to the contrary becomes available. Do not ingest, swallow, or inhale. Do not get in eyes, on skin, or on clothing. Wash thoroughly after handling. This information contains some, but not all, of the information required for the safe and proper use of this material. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

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