
Product Data Sheet

Product Name: UC-1728 (t-TUCB)

Cat. No.: GC33883

Chemical Properties

Cas. No. 948304-40-3

SMILES O=C(O)C1=CC=C(O[C@H]2CC[C@H](NC(NC3=CC=C(OC(F)(F)F)C=C3)=O)CC2)C=C1Formula C₂₁H₂₁F₃N₂O₅ M.Wt 438.4

Solubility DMSO : 50 mg/mL (114.05 mM; Need ultrasonic) Storage Store at -20°C

General tips For obtaining a higher solubility , please warm the tube at 37 °C and shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°C for several months.

Shipping Condition Evaluation sample solution : ship with blue ice All other available size: ship with RT , or blue ice upon request.

Structure **Protocol****Animal experiment:**

Mice[1]Eighteen male SPF New Zealand White Rabbits (2.6-3.2 Kg) are randomly assigned to 3 groups of 6 rabbits each. Rabbits in group 1 have 20 µL sterile PBS intracamerally injected in the right eye (negative control) and all other rabbits receive 100 ng LPS in 20 µL of PBS. Groups 2 and 3 are treated with anti-inflammatory drug or vehicle once daily on the following schedule: 24 h prior to intra-cameral LPS or PBS injection, the day of injection and 24 h post-injection. Group 2 receive UC-1728 (3 mg/kg, SC) and Group 3 receive PEG400 vehicle only (0.9 mL, subcutaneously, (SC)). To limit post-procedural discomfort, systemic buprenorphine (0.03 mg/kg SC) is administered immediately prior to returning rabbits to their cages upon recovery from anesthesia, then every 6-12 h for the first 24 h and as needed for the duration of the study[1].

Caution: Product has not been fully validated for medical applications. For research use only.

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References:

- [1]. McLellan GJ, et al. Effect of a Soluble Epoxide Hydrolase Inhibitor, UC1728, on LPS-Induced Uveitis in the Rabbit. *J Ocul Biol.* 2016 Jan;4(1).
- [2]. Shrestha A, et al. Soluble epoxide hydrolase inhibitor, t-TUCB, protects against myocardial ischaemic injury in rats. *J Pharm Pharmacol.* 2014 Sep;66(9):1251-8.
- [3]. Guedes AG, et al. Use of a soluble epoxide hydrolase inhibitor as an adjunctive analgesic in a horse with

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laminitis. Vet
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Jul;40(4):440-8.

Background

UC-1728 is a potent rabbit soluble epoxide hydrolase (sEH) inhibitor, with an IC₅₀ of 2 nM on rabbit liver.

Miotic, fixed pupils are observed in the treated eyes of both groups receiving LPS injections but the difference in pupillary light reflex scores is only significantly increased in the UC-1728/LPS treated group relative to the PBS group at 6 h post-injection[1]. Pretreatment with UC-1728 (t-TUCB) at 10 and 30 mg/kg, p.o., significantly prevents ISO induced increase in heart weight and elevation of CK-MB and LDH levels ($p < 0.05$), indicating its cardioprotective effect against ISO induced cardiac injury. At 3 mg/kg, p.o. UC-1728 only shows significant protection against heart weight changes. Pretreatment with UC-1728 at 3, 10 and 30 mg/kg, p.o., significantly reduces the ISO induced infarct size ($p < 0.05$) when compared to control. The calculated percentage reductions for these doses are found to be 15.90, 46.60 and 40.44%, respectively[2]. Inhibition of sEH with UC-1728 is associated with a significant improvement in pain scores in one horse with laminitis whose pain is refractory to the standard of care therapy. No adverse effects are noticed[3].

[1]. McLellan GJ, et al. Effect of a Soluble Epoxide Hydrolase Inhibitor, UC1728, on LPS-Induced Uveitis in the Rabbit. J Ocul Biol. 2016 Jan;4(1). [2]. Shrestha A, et al. Soluble epoxide hydrolase inhibitor, t-TUCB, protects against myocardial ischaemic injury in rats. J Pharm Pharmacol. 2014 Sep;66(9):1251-8. [3]. Guedes AG, et al. Use of a soluble epoxide hydrolase inhibitor as an adjunctive analgesic in a horse with laminitis. Vet Anaesth Analg. 2013 Jul;40(4):440-8.

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