
Product Data Sheet

Product Name: Lasmiditan
Cat. No.: GC15121

Chemical Properties

Cas. No. 439239-90-4

Chemical Name 2,4,6-trifluoro-N-[6-(1-methylpiperidine-4-carbonyl)pyridin-2-yl]benzamide

SMILES CN1CCC(CC1)C(=O)C2=NC(=CC=C2)NC(=O)C3=C(C=C(C=C3F)F)F

Formula $C_{19}H_{18}F_3N_3O_2$ M.Wt 377.36

Solubility DMF: 25 mg/ml, DMSO: 25 mg/ml, Ethanol: 30 mg/ml, Ethanol: PBS (pH 7.2) (1:20): 0.04 mg/ml
Store
Storage 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 sizes: ship with RT, or blue ice upon request.

Structure

Background

Lasmiditan is a selective agonist of 5-HT_{1F} receptor with K_i value of 2.21 nM [1].

Lasmiditan shows great selectivity against 5-HT_{1F} over other human recombinant 5-HT receptor subtypes as well as other members of 5-HT₁ family. The K_i values for 5-HT_{2A-2C}, 5-HT₆ and 5-HT₇ are all above 2 μM. In the in vitro functional assay, lasmiditan shows high functional selectivity for 5-HT_{1F} with EC₅₀ value of 43.1 nM. Moreover, oral administration of lasmiditan potently decreases the dural plasma protein extravasation with ID₅₀ value of 2 × 10⁴ μg/kg in the migraine models. It also inhibits trigeminal stimulation-induced c-fos expression in the nucleus caudalis. Furthermore, lasmiditan is proved to be an effective treatment in acute migraine after the phase II trials. And the oral administration is found to be better than the intravenous administration [1, 2]

References:

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

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- [1] Nelson D L, Phebus L A, Johnson K W, et al. Preclinical pharmacological profile of the selective 5-HT_{1F} receptor agonist lasmiditan. *Cephalalgia*, 2010, 30(10): 1159-1169.
- [2] Tfelt-Hansen P C, Olesen J. The 5-HT_{1F} receptor agonist lasmiditan as a potential treatment of migraine attacks: a review of two placebo-controlled phase II trials. *The journal of headache and pain*, 2012, 13(4): 271-275.

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