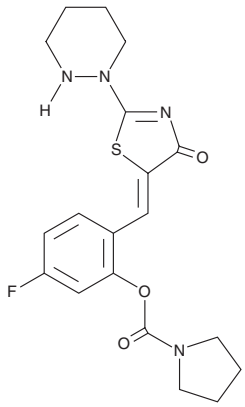
PRODUCT INFORMATION

CLP 290

Item No. 31448



CAS Registry No.:	1181083-81-7
Formal Name:	1-pyrrolidinecarboxylic acid, 5-fluoro-2-[(Z)-[4-oxo-2-(tetrahydro-1(2H)-pyridazinyl)-5(4H)-thiazolylidene]methyl]phenyl ester
MF:	$C_{19}H_{21}FN_4O_3S$
FW:	404.5
Purity:	≥98%
UV/Vis.:	λ_{max}: 243, 336 nm
Supplied as:	A crystalline solid
Storage:	-20°C
Stability:	≥4 years

Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

CLP 290 is supplied as a crystalline solid. A stock solution may be made by dissolving the CLP 290 in the solvent of choice, which should be purged with an inert gas. CLP 290 is soluble in organic solvents such as DMSO and dimethyl formamide. The solubility of CLP 290 in these solvents is approximately 1 mg/ml.

CLP 290 is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, CLP 290 should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. CLP 290 has a solubility of approximately 0.14 mg/ml in a 1:6 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

CLP 290 is a carbamate prodrug form of the K^+/Cl^- cotransporter 2 (KCC2) activator CLP 257 (Item No. 30948).[1] It increases the mechanical paw withdrawal threshold in a rat model of peripheral nerve injury and reverses morphine-induced hyperalgesia in rats when administered at a dose of 100 mg/kg.[1,2] CLP 290 (35 mg/kg) also restores stepping ability, as well as increases body weight support and stride length, in a mouse model of paralysis induced by staggered spinal lesions.[3]

References

1. Gagnon, M., Bergeron, M.J., Lavertu, G., *et al.* Chloride extrusion enhancers as novel therapeutics for neurological diseases. *Nat. Med.* **19(11)**, 1524-1528 (2013).
2. Ferrini, F., Lorenzo, L.-E., Godin, A.G., *et al.* Enhancing KCC2 function counteracts morphine-induced hyperalgesia. *Sci. Rep.* **7(1)**, 3870 (2017).
3. Chen, B., Li, Y., Yu, B., *et al.* Reactivation of dormant relay pathways in injured spinal cord by KCC2 manipulations. *Cell* **174(3)**, 521-535 (2018).

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