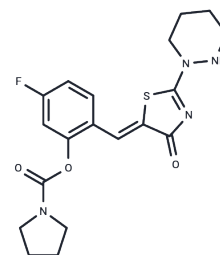


CLP290

Chemical Properties

CAS No. : 1181083-81-7
Formula: C19H21FN4O3S
Molecular Weight: 404.46
Appearance: no data available
Storage: Powder: -20°C for 3 years | In solvent: -80°C for 1 year



Biological Description

Description	CLP290 is an activator of the neuron-specific K ⁺ -Cl ⁻ cotransporter KCC2 and displays potential for the treatment of a wide range of neurological and psychiatric indications.
Targets(IC50)	Potassium Channel
In vivo	In vivo co-treatment with morphine and oral CLP290 prevented membrane KCC2 downregulation in SDH neurons. Concurrently, co-treatment with CLP290 significantly mitigated MIH and acute administration of CLP257 in established MIH restored normal nociceptive behavior.
Animal Research	Morphine sulfate (50 mg/ml) was diluted in saline sterile solution immediately before injection. Morphine or saline were subcutaneously injected twice a day (10 mg/kg; 9 a.m. 6 p.m.) in naïve adult rats. The KCC2 enhancer CLP257 and its carbamate pro-drug CLP290 were freshly diluted in 20% 2-hydroxypropyl-β-cyclodextrin (HPCD) prior injection. CLP257 or vehicle were delivered intraperitoneally after 7-8 days of morphine or saline, as described (100 mg/kg). CLP290 or vehicle were delivered orally by gavage twice a day for the whole duration of the morphine/saline treatment (100 mg/kg).

Solubility Information

Solubility	DMSO: 12 mg/mL (29.67 mM), (< 1 mg/ml refers to the product slightly soluble or insoluble)
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Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.4724 mL	12.3622 mL	24.7243 mL
5 mM	0.4945 mL	2.4724 mL	4.9449 mL
10 mM	0.2472 mL	1.2362 mL	2.4724 mL
50 mM	0.0494 mL	0.2472 mL	0.4945 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Reference

Ferrini F, et al. Enhancing KCC2 function counteracts morphine-induced hyperalgesia. Sci Rep. 2017 Jun 20;7(1):3870.

Inhibitor · Natural Compounds · Compound Libraries · Recombinant Proteins

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