Data Sheet (Cat.No.T61725)

TargetMol

VU0463271 quarterhydrate

Chemical Properties

CAS No. :

Formula: C19H18N4OS2.1/4H2O

Molecular Weight: 387.00

Storage: Powder: -20°C for 3 years | In solvent: -80°C for 1 year
Actual storage temperature shall be subject to the COA.

Biological Description

Description	VU0463271 quarterhydrate is a potent KCC2 antagonist with an IC50 of 61 nM [1].
Targets(IC50)	Others,Potassium Channel
In vitro	VU0463271 is a highly effective antagonist targeting the neuronal-specific potassium-chloride cotransporter 2 (KCC2), demonstrating significant potency with an IC50 value of 61 nM. It exhibits over 100-fold selectivity against the closely related Na-K-2Cl cotransporter 1 (NKCC1) and shows no activity across a wide range of G-protein coupled receptors (GPCRs), ion channels, and transporters. VU0463271 is also characterized by rapid clearance in vitro [1]. When applied to transected CNS preparations, VU0463271 significantly elevates the firing rates in the Drosophila CNS. Concentrations of 1 μM of VU0463271 notably increased the peak firing rate by 2.7- and 2.5-fold over the baseline for OR and rdl strains, respectively [2]. Furthermore, doses ranging from 10-100 nM led to an approximate 20% reduction in CNS firing frequency in a minority of the preparations [2].
In vivo	VU0463271 exhibits moderate-to-high clearance (CL=57 mL/min/kg) in rats when administered intravenously at a dose of 1 mg/kg. Its low steady-state volume of distribution (Vss 0.4 L/kg), combined with its clearance rate, results in a relatively short half-life (t1/2) of 9 minutes in vivo [1].

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.584 mL	12.9199 mL	25.8398 mL
5 mM	0.5168 mL	2.584 mL	5.168 mL
10 mM	0.2584 mL	1.292 mL	2.584 mL
50 mM	0.0517 mL	0.2584 mL	0.5168 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.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.