Data Sheet (Cat.No.T61434)

TargetMol

Mirogabalin besylate

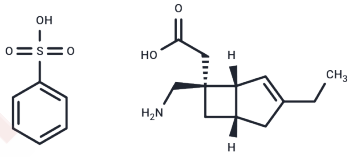
Chemical Properties

CAS No. : 1138245-21-2

Formula: C18H25NO5S

Molecular Weight: 367.46

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	Mirogabalin besylate is a potent and orally active ligand that selectively targets the α2δ subunit of voltage-gated calcium channels. It displays high affinity (K d) values, namely 13.5 nM, 22.7 nM, 27 nM, and 47.6 nM, for human α2δ-1, human α2δ-2, rat α2δ-1, and rat α2δ-2, respectively.
Targets(IC50)	Others,Calcium Channel
In vitro	Mirogabalin besylate specifically targets the α2δ subunit of voltage-gated calcium channels, demonstrating varying binding affinities with dissociation constants (Kd) of 13.5 nM for human α2δ-1, 22.7 nM for human α2δ-2, 27 nM for rat α2δ-1, and 47.6 nM for rat α2δ-2. Additionally, it has shown a strong binding affinity to the gabapentin site in rat cortical brain homogenates, indicated by an IC50 value of 16.0 nM. Notably, at a concentration of 50 μM, mirogabalin does not impact any other receptors, channels, transporters, or enzymes [1].
In vivo	Mirogabalin besylate, administered at doses of 3 and 10 mg/kg, significantly increases area under the curve (AUC) values for 0-8 hours in a dose-dependent manner in rats with partial sciatic nerve ligation. Additionally, doses of 2.5, 5, and 10 mg/kg of Mirogabalin significantly elevate AUC values for 0-12 hours, demonstrating dose-dependent analgesic enhancement, with estimated effective doses (ED) of 4.4 mg/kg on day 1, 3.1 mg/kg on day 3, and less than 2.5 mg/kg by day 5. Furthermore, at 3 and 10 mg/kg, Mirogabalin besylate does not significantly impact rota-rod performance or locomotor activity when administered orally but does show significant inhibition of rota-rod performance at higher doses of 10, 30, and 100 mg/kg, as well as decreases in locomotor activity at 30 and 100 mg/kg in rats [1].

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.7214 mL	13.6069 mL	27.2138 mL
5 mM	0.5443 mL	2.7214 mL	5.4428 mL
10 mM	0.2721 mL	1.3607 mL	2.7214 mL
50 mM	0.0544 mL	0.2721 mL	0.5443 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.