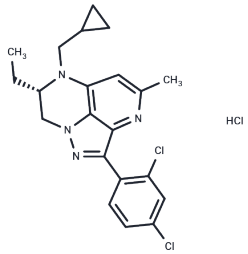
Data Sheet (Cat.No.T86978)

TargetMol

NBI 35965 hydrochloride

Chemical Properties



CAS No. : 1782228-59-4

Formula: C21H23Cl3N4

Molecular Weight: 437.79

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	NBI 35965 hydrochloride is a selective CRF1 (corticotropin-releasing factor receptor 1) antagonist that is both orally active and capable of penetrating the brain. It possesses a K i value of 4 nM and a pK i of 8.5, and does not affect CRF2. This compound effectively diminishes CRF or stress-triggered ACTH (adrenocorticotropic hormone) production in vivo, demonstrating pIC 50 values of 7.1 and 6.9. Additionally, NBI 35965 hydrochloride exhibits anxiolytic properties [1] [2].
Targets(IC50)	CRFR
In vitro	NBI 35965 hydrochloride exhibits high affinity for CRF1 and lacks binding affinity for CRF2. Additionally, in CRF1-transfected cells, NBI 35965 hydrochloride can inhibit Sauvineine-induced cAMP stimulation [2].
In vivo	NBI 35965 hydrochloride, when administered orally at a dose of 20 mg/kg, reduces stress-induced ACTH production in mice [1]. In rats, NBI 35965 hydrochloride (compound 12a; 10 mg/kg) exhibits a volume of distribution of 17.8 L/kg, a plasma clearance rate of 17 mL/min/kg, and a half-life of 12 hours. Its estimated oral bioavailability is 34%, with an average maximum plasma concentration of 560 ng/mL occurring at 1 hour post-administration. This compound is also capable of crossing the blood-brain barrier, achieving an average peak brain concentration of 700 ng/g [1]. Animal Model: Male CD-1 mice (24-26 g) subjected to restraint stress [1] Dosage: 20 mg/kg (10 mL/kg 5% mannitol-d (w/v) in water) Administration: Oral gavage, 60 minutes before stressor initiation Result: Decreased stress-induced ACTH production in vivo.

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.2842 mL	11.421 mL	22.842 mL
5 mM	0.4568 mL	2.2842 mL	4.5684 mL
10 mM	0.2284 mL	1.1421 mL	2.2842 mL
50 mM	0.0457 mL	0.2284 mL	0.4568 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.