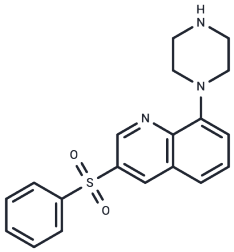
Data Sheet (Cat.No.T1774)

TargetMol

Intepirdine

Chemical Properties



CAS No. : 607742-69-8

Formula: C19H19N3O2S

Molecular Weight: 353.44

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	Intepirdine (GSK-742457) is a highly selective 5-HT6 receptor antagonist, used in trials studying the treatment of Alzheimer's Disease.
Targets(IC50)	5-HT Receptor
In vitro	SB-742457 is a selective 5-HT6 receptor antagonist with cognition, memory, and learning-enhancing effects. [2] SB-742457 is a novel cognitive enhancing agent for Alzheimer's disease. SB-742457 is a potential agent added to stablize donepezil treatment in subjects with mild-to-moderate Alzheimer's disease. [1]
Kinase Assay	In vitro kinase activity assay: EGFR kinase: Each 100 μL enzyme reaction contained 10 μL of inhibitor in 50% Me2SO, 20 μL of substrate solution (200 mM HEPES pH 7.4, 50 mM Mg-acetate, 2.5 mg/mL poly (EY), 5 μg/mL bio-pEY) and 20 μL enzyme preparation. The enzymatic reaction is started by addition of 50 μL of a 100 μM ATP solution made in 10 mM MgCl2. Assays are carried out at room temperature for 30 min and terminated by the addition of 50 μL of stop solution (250 mM EDTA in 20 mM HEPES pH 7.4). 100 μL are transferred to a streptavidin coated microtiterplate, after an incubation time of 60 min at room temperature the plate is washed with 200 μL of wash solution (50 mM Tris, 0.05% Tween20). A 100 μL aliquot of a HRPO- labeled anti-PY antibody (PY20H Anti-Ptyr:HRP) 250 ng/mL are added to the wells. After 60 min of incubation, the plate is washed three times with a 200 μL wash solution. The samples are then developed with a 100μL TMB Peroxidase Solution (A:B= 1:1). The reaction is stopped after 10 min. The plate is transferred to an ELISA reader and extinction is measured at OD450 nM. HER2-IC enzyme: Enzyme activity is assayed in the presence or absence of serial inhibitor dilutions performed in 50 % Me2SO. Each 100 μL reaction contains similar components as described for EGFR kinase assay with addition of 1000 μM Na3VO4. The enzymatic reaction is started by addition of 50μL of 500 μM ATP solution made in 10 mM Mg-acetate. The dilution of the enzyme is set so that incorporation of phosphate into bio-pEY is linear with respect to time and amount of enzyme. The enzyme preparation is diluted in 20 mM HEPES pH 7.4, 130 mM NaCl, 0.05% Triton X-100, 1 mM DTT and 10% glycerol. Assays are carried out at room temperature for 30 min and terminated by the addition of 50 μL of stop solution. Src kinase assays: Each 100 μL reaction contained 10 μL of inhibitor in 50 % Me2SO, 20μL of enzyme preparation, 20 μL of substrate solution supplemented with 1000 μM Na3VO4.The enzymatic reaction is started by addition of 50 μL of a 1000 μM ATP solution made in 10 mM Mg-acetate. BIRK kinase assay: 250 mM Tris pH 7.4, 10 mM DTT, 2.5 mg/mL poly(EY), 5 mg/mL bio-pEY is used as substrate

Kinase Assay	solution and enzymatic reaction is started by addition of 50 µL of a 2 mM ATP solution made in 8 mM MnCl2, 20 mM Mg-acetate. VEGF2 and HGFR kinase assays: Assays are carried out at room temperature for 20 minutes and terminated by the addition of 10 µL of 5 % H3PO4. The precipitate is then trapped onto GF/B filters using a 96 well filter mate universal harvester. After extensive washing the filter plate is dried for 1 h at 50°C, sealed and incorporated radioactivity is determined by scintillation counting using a TopCount? or a Microbeta b counter?.

Solubility Information

Solubility	Ethanol: 2 mg/mL (5.66 mM),Sonication is recommended. H2O: < 1 mg/mL (insoluble or slightly soluble), DMSO: 70 mg/mL (198.05 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+40% PEG300+5% Tween 80+45% Saline: 2 mg/mL (5.66 mM),Sonication is recommended. *Please add the solvents sequentially, clarifying the solution as much as possible before adding the next one. Dissolve by heating and/or sonication if necessary. Working solution is recommended to be prepared and used immediately. The formulation provided above is for reference purposes only. In vivo formulations may vary and should be modified based on specific experimental conditions.*

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.8293 mL	14.1467 mL	28.2933 mL
5 mM	0.5659 mL	2.8293 mL	5.6587 mL
10 mM	0.2829 mL	1.4147 mL	2.8293 mL
50 mM	0.0566 mL	0.2829 mL	0.5659 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.

Reference

Chuang ATT, et al. Alzheimers Dement, 2006, 2, S631-S632 (abstract).
Rychtyk J, Partyka A, Gdula-Argasińska J, et al. 5-HT6 receptor agonist and antagonist improve memory impairments and hippocampal BDNF signaling alterations induced by MK-801. Brain Research. 2019: 146375
Upton N, et al. Neurotherapeutics, 2008, 5(3), 458-469.
Wesołowska A, Rychtyk J, Gdula-Argasińska J, et al Effect of 5-HT6 Receptor Ligands Combined with Haloperidol or Risperidone on Antidepressant-/Anxiolytic-Like Behavior and BDNF Regulation in Hippocampus and Prefrontal Cortex of Rats. Neuropsychiatric Disease and Treatment. 2021, 17: 2105.
Partyka A, Górecka K, Gdula-Argasińska J, et al.Selective 5-HT6 Receptor Ligands (Agonist and Antagonist) Show Different Effects on Antipsychotic Drug-Induced Metabolic Dysfunctions in Rats.Pharmaceuticals.2023, 16(2): 154.