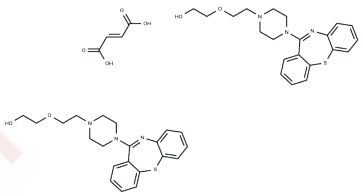
Data Sheet (Cat.No.T6241)

TargetMol

Quetiapine hemifumarate

Chemical Properties



CAS No. : 111974-72-2

Formula: C46H54N6O8S2

Molecular Weight: 883.09

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	Quetiapine hemifumarate (ICI-204636), an atypical antipsychotic, is used in the treatment of bipolar I mania, schizophrenia, bipolar II depression, bipolar I depression.
Targets(IC50)	5-HT Receptor,Adrenergic Receptor,Dopamine Receptor
In vitro	Quetiapine alters the neurotransmitter norepinephrine in the brain's limbic system and the expression of c-fos. It also exhibits antipsychotic activity, diminishing the tendency to induce extrapyramidal symptoms and persistently increase prolactin levels. Its effectiveness in behavioral and biochemical assays mirrors that of clozapine, suggesting it may possess neuroprotective properties.
In vivo	Quetiapine has an affinity for dopamine-2 receptors similar to that of clozapine, and it exhibits comparable affinity for various neurotransmitter receptors, including serotonin, histamine, dopamine, and adrenergic receptors.
Kinase Assay	CDK activity assays: CDK assays for IC50 determinations and kinetic evaluation are performed in 96-well filter plates. All CDK-cyclin kinase complexes are expressed in insect cells through baculovirus infection and purified. The substrate for the assays is a fragment (amino acids 792–928) of pRb fused to GST (GST?RB-Cterm). The total reaction volume is 0.1 mL containing a final concentration of 20 mM Tris-HCl, pH 7.4, 50 mM NaCl, 1 mM dithiothreitol, 10 mM MgCl2 25 μM ATP (for CDK4-cyclin D1, CDK6-cyclin D2, and CDK6-cyclin D3) containing 0.25 μCi of [γ-32P]ATP, 20 ng of enzyme, 1 μg of GST?RB-Cterm, and appropriate dilutions of inhibitor. All components except the [γ-32P]ATP are added to the wells, and placed on a plate mixer for 2 min. The reaction is started by adding the [γ-32P]ATP, and incubated at 25℃ for 15 min. The reaction is terminated by addition of 0.1 mL of 20% trichloroacetic acid, and the plate is kept at 4?℃ for at least 1 hr to allow the substrate to precipitate. The wells are then washed five times with 0.2 mL of 10% trichloroacetic acid, and radioactive incorporation is determined with a β plate counter.

Solubility Information

Solubility	H2O: 1.56 mg/mL (1.77 mM),Sonication is recommended. DMSO: 50.5 mg/mL (57.19 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)

In vivo Formulation	10% DMSO+90% Saline: 5.05 mg/mL (5.72 mM),Solution. 10% DMSO+40% PEG300+5% Tween 80+45% Saline: 2 mg/mL (2.26 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	1.1324 mL	5.6619 mL	11.3239 mL
5 mM	0.2265 mL	1.1324 mL	2.2648 mL
10 mM	0.1132 mL	0.5662 mL	1.1324 mL
50 mM	0.0226 mL	0.1132 mL	0.2265 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

Nemeroff CB, et al. J Clin Psychiatry, 2002, 63 Suppl 13, 5-11.
Xu H, et al. Hippocampus, 2006, 16(6), 551-559.
Kessler RM, et al. Neuropsychopharmacology, 2006, 31(9), 1991-2001.
Luo C, et al. Brain Res, 2005, 1063(1), 32-39.
Peters JL, et al. Acta Radiol. 1993 Sep;34(5):510-6.