Data Sheet (Cat.No.T7823)

TargetMol

IDRA-21

Chemical Properties

CAS No. : 22503-72-6

Formula: C8H9ClN2O2S

Molecular Weight: 232.69

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	IDRA-21 is a positive AMPA receptor modulator.
Targets(IC50)	GluR,iGluR
In vivo	Oral administration of IDRA 21 produced a highly significant improvement in the performance of a delayed matching-to-sample (DMTS) task by young adult rhesus monkeys.?The pattern of task improvement over the dose range 0.15-10 mg/kg was maintained to 48 hr after the single dose administration.?For sessions run after administration of the individualized Best Dose of IDRA 21, task accuracy for Long delay (most difficult) trials was increased by 34% of vehicle.?Animals were randomly assigned fixed doses of IDRA 21 to determine whether the positive mnemonic response could be maintained.?The repeated doses were separated by 3 days, thus allowing for potential cumulative effects.?IDRA 21 produced a gradual increase in task accuracy that was maintained on average above vehicle performance levels over an intermittent dosing schedule during a total period of 3 weeks.?A separate group of aged monkeys (>20 y) were, as a group, impaired (during vehicle testing) in DMTS performance efficiency relative to the young cohort.?IDRA 21 also improved task accuracy by aged rhesus monkeys over the same dose range, but the responses were not as robust as those exhibited by young animals.?Aged subjects also appeared to be more individually sensitive to drug dose, and they exhibited shorter task latencies than did the young group[1].

Solubility Information

Solubility	DMSO: 25 mg/mL (107.44 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 (8.6 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	4.2976 mL	21.4878 mL	42.9756 mL
5 mM	0.8595 mL	4.2976 mL	8.5951 mL
10 mM	0.4298 mL	2.1488 mL	4.2976 mL
50 mM	0.086 mL	0.4298 mL	0.8595 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

Buccafusco J J , Weiser T , Winter K , et al. The effects of IDRA 21, a positive modulator of the AMPA receptor, on delayed matching performance by young and aged rhesus monkeys[J]. Neuropharmacology, 2004, 46(1):10-22.
Losi G , Puia G , Braghiroli D , et al. IDRA-21, a positive AMPA receptor modulator, inhibits synaptic and extrasynaptic NMDA receptor mediated events in cultured cerebellar granule cells[J]. neuropharmacology, 2004, 46(8):1105-1113.