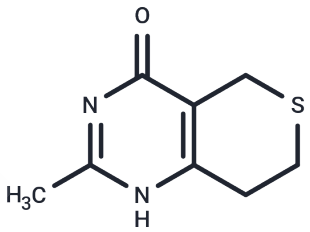
Data Sheet (Cat.No.T22749)

DR2313

Chemical Properties



CAS No. :	284028-90-6
Formula:	C8H10N2OS
Molecular Weight:	182.24
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	DR2313 is a competitive inhibitor of poly(ADP-ribose) polymerase (IC50: 0.20 and 0.24 μM for PARP-1 and PARP-2 respectively). It also has neuroprotective.
Targets(IC50)	PARP
In vitro	DR 2313 decreases neuronal cell death in models of cerebral ischemia in vivo and in vitro.
In vivo	In both permanent and transient focal ischemia models in rats, pretreatment with DR2313 (10 mg/kg i.v. bolus and 10 mg/kg/h i.v. infusion for 6 h) significantly reduced the cortical infarct volume.?To determine the therapeutic time window of neuroprotection by DR2313, the effect of post-treatment was examined in transient focal ischemia model and compared with that of a free radical scavenger, MCI-186 (3-methyl-1-phenyl-2-pyrazolone-5-one).?Pretreatment with MCI-186 (3 mg/kg i.v. bolus and 3 mg/kg/h i.v. infusion for 6 h) significantly reduced the infarct volume, whereas the post-treatment failed to show any effects.?In contrast, post-treatment with DR2313 (same regimen) delaying for 2 h after ischemia still prevented the progression of infarction.?These results indicate that DR2313 exerts neuroprotective effects via its potent PARP inhibition, even when the treatment is initiated after ischemia.?Thus, a PARP inhibitor like DR2313 may be more useful in treating acute stroke than a free

Solubility Information

Solubility	DMSO: 18.33 mg/mL (100.58 mM),Sonication is recommended. H2O: 9.1 mg/mL (49.93 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	5.4873 mL	27.4363 mL	54.8727 mL
5 mM	1.0975 mL	5.4873 mL	10.9745 mL
10 mM	0.5487 mL	2.7436 mL	5.4873 mL
50 mM	0.1097 mL	0.5487 mL	1.0975 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

Nakajima H, et, al. A newly synthesized poly(ADP-ribose) polymerase inhibitor, DR2313 [2-methyl-3,5,7,8-tetrahydrothiopyrano[4,3-d]-pyrimidine-4-one]: pharmacological profiles, neuroprotective effects, and therapeutic time window in cerebral ischemia in rats. J Pharmacol Exp Ther. 2005 Feb;312(2):472-81.