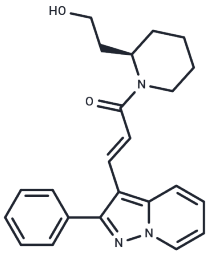
Data Sheet (Cat.No.T27323)

TargetMol

FK-453

Chemical Properties



CAS No. : 121524-18-3

Formula: C23H25N3O2

Molecular Weight: 375.46

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	FK-453 is a potent antagonist of non-xanthine adenosine A1 receptor with diuretic and renal vasodilatory activity.
Targets(IC50)	Adenosine Receptor
In vivo	FK-453 (50, 100, and 200 mg; three single oral) Glomerular filtration rate (clearance of 51Cr-labeled EDTA) rose by 18.0%, 3 h after the administration of 100 mg of FK-453 and by 18.3% and 23.5%, 2 and 3 h, respectively, after the 200 mg dose. There were statistically significant increases in urine flow rate and osmolar clearance, as well as absolute and fractional excretions of sodium, phosphate, bicarbonate, chloride, magnesium, and uric acid in response to FK-453.[2]

Solubility Information

Solubility	DMSO: 60 mg/mL (159.8 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: 2.5 mg/mL (6.66 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	2.6634 mL	13.317 mL	26.634 mL
5 mM	0.5327 mL	2.6634 mL	5.3268 mL
10 mM	0.2663 mL	1.3317 mL	2.6634 mL
50 mM	0.0533 mL	0.2663 mL	0.5327 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

Terai T, et al. General pharmacology of the new non-xanthine adenosine A1 receptor antagonist (+)-(R)-[(E)-3-(2-phenylpyrazolo[1,5-a]pyridin-3-yl)acryloyl]-2- piperidine ethanol. Arzneimittelforschung. 1996;46(2):185-191.
Balakrishnan VS, et al. A potential role for endogenous adenosine in control of human glomerular and tubular function. Am J Physiol. 1993;265(4 Pt 2):F504-F510.
Takeda M, et al. Regulation of Na(+)-3HCO3- cotransport in rabbit proximal convoluted tubule via adenosine A1 receptor. Am J Physiol. 1993;265(4 Pt 2):F511-F519.