Product Data Sheet

Product Name: AGK7
Cat. No.: GC15931

Chemical Properties

Cas. No.	304896-21-7		
Chemical Name	2-cyano-3-[5-(2,5-dichlorophenyl)-2-furanyl]-N-8-quinolinyl-2-propenamide		
SMILES	O=C(/C(C#N)=C/C1=CC=C(C2=CC(Cl)=CC=C2Cl)O1)NC3=CC=CC4=C3N=CC=C4		
Formula	$C_{23}H_{13}Cl_2N_3O_2$	M.Wt	434.3
Solubility	≤0.5mg/ml in DMSO;0.2mg/ml in dimethyl formamide	Storage	Store at -20°C
General tips	For obtaining a higher solubility , please warm the tube at 37 ℃ and shake it in the ultrasonic bath for a while.Stock solution can be stored below -20℃ for several months.		
Shipping Condition	Evaluation sample solution : ship with blue ice All other available size: ship with RT , or blue ice upon request.		
Structure	AGK7		

Background

AGK7 is an inactive control of AGK2, a cell-permeable and selective SIRT2 inhibitor [1][2].

The sirtuins are members of the histone deacetylase family of proteins that participate in many cellular functions and play an important role in aging. Silent information regulator 2 (Sir2) is a nicotinamide adenine dinucleotide-dependent histone deacetylase (HDAC) in yeast that participates in cell protection and cell cycle regulation. Human SIRT2 is involved in cell cycle regulation through the deacetylation ofα-tubulin [1].

AGK7 is an inactive control of AGK2 to be used in experiments with AGK2. AGK2 is a cell-permeable, potent and selective SIRT2 inhibitor with IC50 value of 3.5 μM. AGK2 slightly inhibited SIRT1 and 3 only at concentrations over 40 μM. Relative to an inactive control AGK7, AGK2 increased acetylated tubulin. In H4 cells transfected with α-Syn, AGK2 reduced α-Syn-mediated toxicity in a dose-dependent way. By contrast, the inactive AGK7 had no effect. In H4 cells cotransfected withα-Syn and synphilin-1, the inactive AGK7 failed to affect a-Syn aggregation, whereas AGK2 promoted the formation of enlarged inclusions [1].

References:

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[1]. Outeiro TF, Kontopoulos E, Altmann SM, et al. Sirtuin 2 inhibitors rescue alpha-synuclein-mediated toxicity in models of Parkinson's disease. Science. 2007 Jul 27;317(5837):516-9.
[2]. Cole PA. Chemical probes for histone-modifying enzymes. Nat Chem Biol. 2008 Oct;4(10):590-7.

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