Product Data Sheet

Product Name: MI-nc (hydrochloride)
Cat. No.: GC12173

Chemical Properties

Cas. No.	1934302-23-4		
Chemical Name	6-ethyl-4-[4-(1,3,4-thiadiazol-2-yl)-1-piperazinyl]-thieno[2,3-d]pyrimidine, dihydrochloride		
SMILES	CCC(S1)=CC(C1=NC=N2)=C2N3CCN(C4=NN=CS4)CC3.Cl.Cl		
Formula	$C_{14}H_{16}N_6S_2 \cdot 2HCl$	M.Wt	405.4
Solubility	≤0.1mg/ml in ethanol;1.3mg/ml in DMSO;0.5mg/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	MI-nc (hydrochloride)		

Background

MI-nc is a weak inhibitor of the menin-MLL fusion protein interaction with an IC50 of 193 μM. It can be used as a negative control compound for tests involving MI-2, which showed more binding potency with menin, blocked the menin-MLL interaction with an IC50 of 0.45 μM, and induced apoptosis in cells expressing MLL fusion proteins [1].

Menin, a product of the multiple endocrine neoplasia gene, is an essential co-factor of oncogenic MLL fusion proteins. MLL interacts with menin in a bivalent mode involving 2 N-terminal fragments of MLL, and the menin–MLL interaction is critical for development of acute leukemia. Inhibition of the menin interaction with MLL fusion proteins is a very promising strategy to reverse their oncogenic activity [2].

References:
[1]. Grembecka J, He S, Shi A, et al. Menin-MLL inhibitors reverse oncogenic activity of MLL fusion proteins in leukemia[J]. Nature chemical biology, 2012, 8(3): 277-284.

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[2]. Yokoyama A, Somervaille T C P, Smith K S, et al. The menin tumor suppressor protein is an essential oncogenic cofactor for MLL-associated leukemogenesis[J]. Cell, 2005, 123(2): 207-218.

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