Product Data Sheet

Product Name: OU749
Cat. No.: GC12981

Chemical Properties

Cas. No.	519170-13-9		
Chemical Name	N-[5-[(4-methoxyphenyl)methyl]-1,3,4-thiadiazol-2-yl]-benzenesulfonamide		
SMILES	COC1=CC=C(CC2=NN=C(NS(C3=CC=CC=C3)(=O)=O)S2)C=C1		
Formula	$C_{16}H_{15}N_3O_3S_2$	M.Wt	361.4
Solubility	≤5mg/ml in ethanol;30mg/ml in DMSO;30mg/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	OU749		

Background

OU749 is a competitive inhibitor of γ-glutamyl transpeptidase (GGT) [1].

Expression of γ-glutamyl transpeptidase (GGT) in tumors contributes to the resistance to radiation and chemotherapy. GGT is inhibited by glutamine analogues which compete with the substrate for the γ-glutamyl binding site [1].

OU749 inhibited human kidney GGT with an intrinsic Ki of 17.6 M [1]. In 786-O cells, a human renal tumor cell line, OU749 showed more than 150-fold less toxic than the GGT inhibitor acivicin toward dividing cells. OU749 inhibited GGT isolated from human kidney in a dose-dependent manner [1]. OU749 was 7-fold less potent as inhibitor of GGT isolated from rat kidney and 10-fold less potent inhibiting GGT from mouse kidney [1]. OU749 did not inhibit degradation of glutathione by GGT from rat kidney. Inhibition of GGT by OU749 is species-specific [1]. OU749 showed no inhibitory effect on GGT from pig cells. OU749 inhibited human GGT expressed in mouse fibroblasts by a similar extent

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to the GGT from human cells, indicated that the species specificity was determined by differences in the primary structure of the protein rather than species-specific, post-translational modifications [1].

Reference:

[1] King J B, West M B, Cook P F, et al. A novel, species-specific class of uncompetitive inhibitors of γ-glutamyl transpeptidase[J]. Journal of Biological Chemistry, 2009, 284(14): 9059-9065.