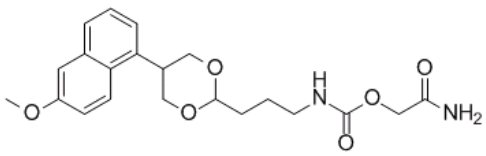
Product Data Sheet

Product Name: SA72
Cat. No.: GC31239

Chemical Properties

Cas. No.	934809-60-6		
SMILES	O=C(OCC(N)=O)NCCCC1OCC(C2=C3C=CC(OC)=CC3=CC=C2)CO1		
Formula	$C_{21}H_{26}N_2O_6$	M.Wt	402.44
Solubility	Soluble in DMSO	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			



Protocol

Caution: Product has not been fully validated for medical applications. For research use only.
Tel: (909) 407-4943 Fax: (626) 353-8530 E-mail: tech@glpbio.com
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Kinase experiment: Rat liver microsomes and cytosol are as sources of carboxylesterase to screen activity. Assays are conducted in 96-well microtiter plates at room temperature. Briefly, 0.5 mg liver microsomes or 2 mg cytosol are incubated with 10 mM SA72 for 30 min and then substrate p-nitrophenyl acetate is added to a final concentration of 1 mM. The plate is read 10 min after substrate addition at 405 nm for the appearance of the p-nitrophenol. The carboxylesterase activities in liver extracts without inhibitor added are set at 100% and the remaining carboxylesterase activities after incubation with inhibitors are calculated relative to the control[1].

References:

[1]. Zhang D, et al. Fatty acid amide hydrolase inhibitors display broad selectivity and inhibit multiple carboxylesterases as off-targets. Neuropharmacology. 2007 Mar;52(4):1095-105.

Background

SA72 is a highly selective fatty acid amide hydrolase (FAAH) inhibitor.

Fatty acid amide hydrolase (FAAH) is the primary regulator of several bioactive lipid amides including anandamide. Inhibitors of FAAH are potentially useful for the treatment of pain, anxiety, depression, and other nervous system disorders. However, FAAH inhibitors must display selectivity for this enzyme relative to the numerous other serine hydrolases present in the human proteome in order to be therapeutically acceptable. SA-72 is also a carbamate inhibitor. However, SA-72 shows exceptional selectivity for FAAH. Tested carboxylesterases are not off-targets for SA-72. SA-72 does not have major effects on the level of carboxylesterase activities in liver microsomes[1].

[1]. Zhang D, et al. Fatty acid amide hydrolase inhibitors display broad selectivity and inhibit multiple carboxylesterases as off-targets. Neuropharmacology. 2007 Mar;52(4):1095-105.

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