Product Data Sheet

Product Name: GSK-3β Inhibitor II
Cat. No.: GC16187

Chemical Properties

Cas. No.	478482-75-6		
Chemical Name	4-[5-[[(3-iodophenyl)methyl]thio]-1,3,4-oxadiazol-2-yl]-pyridine		
SMILES	IC1=CC(CSC2=NN=C(C3=CC=NC=C3)O2)=CC=C1		
Formula	$C_{14}H_{10}IN_3OS$	M.Wt	395.2
Solubility	≤3mg/ml in DMSO;10mg/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	GSK-3β Inhibitor II		

Background

IC50: 390 nM for GSK-3β

GSK-3β Inhibitor II is a GSK-3β inhibitor.

Glycogen Synthase Kinase-3 (GSK-3), a protein-serine kinase, is implicated in the hormonal control of various regulatory proteins. A number of substrates have been identified, which implicates GSK-3 in the regulation of several physiological processes. Moreover, it has been reported that compounds that specifically inhibit GSK-3 activity may be useful in the treatment of diabetes.

In vitro: In a previous study, by using a virtual screening strategy based on a methodology derived from the CATS molecular descriptor, a novel compound class including GSK-3β Inhibitor II with inhibitory activity against the GSK-3 enzyme was identified via scaffold hopping. GSK-3β Inhibitor II was found to be a potent inhibitor of GSK-3β with the IC50 value of 390 nM. However, GSK-3β Inhibitor II was not able to

Tel: (909) 407-4943 Fax: (626) 353-8530 E-mail: tech@glpbio.com
Address: 10292 Central Ave. #205, Montclair, CA, USA

inhibit another GSK-3 isoform, GSK-3α [1]. Another study found that GSK-3β Inhibitor II could block the functional regulation of p53 through inhibiting GSK-3β, decreasing MDM2 levels, and modulating mitochondrial p53 apoptotic signaling [2].

In vivo: Up to now, there is no animal in vivo data reported.

Clinical trial: So far, no clinical study has been conducted.

References:
[1] Naerum, L. ,Nrskov-Lauritsen, L. and Olesen, P.H. Scaffold hopping and optimization towards libraries of glycogen synthase kinase-3 inhibitors. Bioorg.Med.Chem.Lett. 12(11), 1525-1528 (2002).
[2] Watcharasit, P. ,Bijur, G.N.,Song, L., et al. Glycogen synthase kinase-3beta (GSK3beta) binds to and promotes the actions of p53. J.Biol.Chem. 278(49), 49972-48879 (2003).