Product Data Sheet

Product Name: Luotonin F
Cat. No.: GC15336

Chemical Properties

Cas. No.	244616-85-1		
Chemical Name	2-(3-quinolinylcarbonyl)-4(3H)-quinazolinone		
SMILES	O=C1NC(C(C2=CC(C=CC=C3)=C3N=C2)=O)=NC4=CC=CC=C41		
Formula	$C_{18}H_{11}N_3O_2$	M.Wt	301.3
Solubility	≤2.5mg/ml in DMSO;2.5mg/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	Luotonin F		

Background

Luotonin F is an alkaloid found in the aerial parts of the Peganum nigellastrum Bunge, a plant which has been long used in traditional Chinese medicine for the treatment of rheumatism, abscesses, and various other inflammatory conditions [1].

Due to their biological and pharmaceutical activities, many synthetic methods have been developed for the synthesis of luotonins. An efficient one-pot synthetic protocol has been proposed for the synthesis of luntonin F from easily available starting materials. Through the rational logical design, multifundamental reactions were assembled in one-pot, such as iodination, Kornblum oxidation, and annulations [2]. The developed approach could efficiently synthesize luntonin F and various analogues. Luotonin F showed promising cytotoxicity against leukemia P-388 cells with an IC50 value of 2.3 μg/ml by stabilizing the DNA topoisomerase I-DNA complex [1].

References:

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

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[1] Liang J L, Cha H C, Jahng Y. Recent advances in the studies on luotonins[J]. Molecules, 2011, 16(6): 4861-4883.
[2] Zhu Y, Fei Z, Liu M, et al. Direct one-pot synthesis of Luotonin F and analogues via rational logical design[J]. Organic letters, 2012, 15(2): 378-381.

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