Product Data Sheet

Product Name: CD 2314
Cat. No.: GC10080

Chemical Properties

Cas. No.	170355-37-0		
Chemical Name	5-(5,5,8,8-tetramethyl-5,6,7,8-tetrahydroanthracen-2-yl)thiophene-3-carboxylic acid		
SMILES	CC(CCC1(C)C)(C2=C1C=C3C=C(C4=CC(C(O)=O)=CS4)C=CC3=C2)C		
Formula	$C_{23}H_{24}O_2S$	M.Wt	364.5
Solubility	<36.45mg/ml 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	CD 2314		

Background

CD 2314 is a potent and selective agonist of RARβ with Kd value of 145 and >3760 nM for RARβ and RARα receptors, respectively [1].

Retinoic acid receptor β (RARβ) is a nuclear receptor for retinoic acid and localizes to the cytoplasm and subnuclear compartments. RARβ mediates cellular signalling in cell growth, differentiation and embryonic morphogenesis.

CD 2314 is a potent and selective RARβ agonist. CD 2314 didn’t inhibit the activation-induced apoptosis of thymocytes because of the absent of RARβ in the thymus [1]. CD 2314 inhibited cells growth with IC50 values of 8.0, 3.0, 5.7 and >10 μM for human head and neck squamous cell carcinoma (HNSCC) 22A, 22B, 183A and 886 cell lines, respectively. In UMSCC22B cells, the combination of CD2314 with RXR-selective retinoids, such as SR11234, SR11203, SR11246 and SR11236 inhibited cells growth [2]. In KG-1 cells, CD 2314 didn’t induce folate receptor β (FR-β) expression, indicating that the induction of FR-β was not mediated by RARβ [3].

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References:
[1]. Szondy Z, Reichert U, Bernardon JM, et al. Inhibition of activation-induced apoptosis of thymocytes by all-trans- and 9-cis-retinoic acid is mediated via retinoic acid receptor alpha. Biochem J, 1998, 331 (Pt 3): 767-774.
[2]. Sun SY, Yue P, Mao L, et al. Identification of receptor-selective retinoids that are potent inhibitors of the growth of human head and neck squamous cell carcinoma cells. Clin Cancer Res, 2000, 6(4): 1563-1573.
[3]. Xu Y, Wang T, Tang R, et al. All-trans retinoic acid is capable of inducing folate receptor β expression in KG-1 cells. Tumour Biol, 2010, 31(6): 589-595.

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