Product Data Sheet

Product Name: all-trans-4-Oxoretinoic acid (all-trans 4-Keto Retinoic Acid)
Cat. No.: GC31420

Chemical Properties

Cas. No.	38030-57-8		
SMILES	CC(/C=C/C=C(/C=C/C1=C(C(CCC(C)1C)=O)C)C)=C\C(O)=O		
Formula	$C_{20}H_{26}O_3$	M.Wt	314.42
Solubility	DMSO : 150 mg/mL (477.07 mM)	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			

Background

4-oxo Retinoic acid is an active metabolite of the vitamin A metabolite and retinoic acid receptor (RAR) ligand all-*trans* retinoic acid .[1] It is formed from all-*trans* retinoic acid by several cytochrome P450 (CYP) isoforms, including CYP1A1, CYP3A7, and CYP26A1.[2,3] 4-oxo Retinoic acid binds to RARα, RARβ, and RARγ (IC_{50}s = 59, 50, and 142 nM, respectively, in radioligand binding assays) and induces expression of a luciferase reporter in COS-7 cells expressing RARα, RARβ, or RARγ (EC_{50}s = 33, 8, and 89 nM, respectively).[1] It increases protein levels of cytokeratin 7 (CK-7) and CK-19 in human epidermal keratinocytes when used at a concentration of 1 ?M.[4] 4-oxo Retinoic acid (10-1,000 nM) inhibits the proliferation of MCF-7 breast cancer cells.[5] It is teratogenic to zebrafish embryos (EC_{50} = 8.1 nM).[6]

1.Idrest, N., Marill, J., Flexor, M.A., et al.Activation of retinoic acid receptor-dependent transcription by all-trans-retinoic acid metabolites and isomersJ. Biol. Chem.277(25)31491-31498(2002) 2.Marill, J., Cresteil, T., Lanotte, M., et al.Identification of human cytochrome P450s involved in the formation of all-trans-retinoic acid principal

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