Product Data Sheet

Product Name: Icilin
Cat. No.: GC16882

Chemical Properties

Cas. No.	36945-98-9		
Chemical Name	3-(2-hydroxyphenyl)-6-(3-nitrophenyl)-1,4-dihydropyrimidin-2-one		
SMILES	C1C=C(NC(=O)N1C2=CC=CC=C2O)C3=CC(=CC=C3)[N+](=O)[O-]		
Formula	$C_{16}H_{13}N_3O_4$	M.Wt	311.29
Solubility	≥ 11.05mg/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	Icilin		

Background

Icilin is an agonist of TRPM8 and hENaCδ [1, 2]

Icilin is a synthetic supercooling compound. It is reported that icilin can activate TRPM8 to some small degree in the absence of extra-cellular Ca2+. It further enhances the potency of icilin and the subsequent activation of TRPM8 channel. Icilin is also an agonist of hENaCδ. In the homomeric hENaCδ-expressing oocytes, 100μM icilin induces an inward current significantly. This effect can be reduced when the external Na+ is removed. In addition, icilin shows anti-proliferation efficacy in PC-3 cells. It induces G1 arrest via modulating the expression of cell cycle regulators including cyclin A, cyclin D1, CDK1 and CDK2. Icilin plays this role without affecting TRPM8 but through activating NK and p38 kinase pathways [1, 2 and 3]

References:
[1] Chuang H, Neuhausser W M, Julius D. The super-cooling agent icilin reveals a mechanism of coincidence detection by a temperature-sensitive TRP channel. Neuron,

Caution: Product has not been fully validated for medical applications. For research use only.
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2004, 43(6): 859-869.
[2] Yamamura H, Ugawa S, Ueda T, et al. Icilin activates the δ-subunit of the human epithelial Na+ channel. Molecular pharmacology, 2005, 68(4): 1142-1147.
[3] Kim S H, Kim S Y, Park E J, et al. Icilin induces G1 arrest through activating JNK and p38 kinase in a TRPM8-independent manner. Biochemical and biophysical research communications, 2011, 406(1): 30-35.

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