

**Catalog # 10-4380**

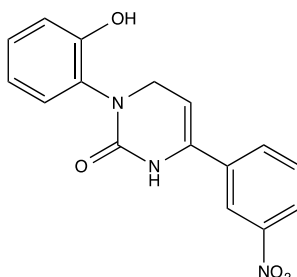
**Icilin**

CAS# 36945-98-9

AG 3-5

3,6-Dihydro-1-(2-hydroxyphenyl)-4-(3-nitrophenyl)-1H-pyrimidin-2-one

Lot # FBS2074



Icilin is an agonist of cold-sensitive TRP channels with 2.5-fold greater efficacy and 200-fold greater potency than menthol ( $EC_{50} = 0.36 \mu\text{M}$  for CRM1, rat orthologue of TRPM8).<sup>1</sup> Agonist at TRPM8 ( $EC_{50} = 0.2 \mu\text{M}$ )<sup>2</sup> and ANKTM1 (TRPA1)<sup>3</sup>. Agonist effects require  $\text{Ca}^{2+}$  and are pH dependent.<sup>2,4</sup> Icilin induced G1 arrest in PC-3 prostate cancer cells without cell death.<sup>5</sup>

- 1) McKemy *et al.* (2002) *Identification of a cold receptor reveals a general role for TRP channels in thermosensation.* *Nature* **416** 52
- 2) Andersson *et al.* (2004) *TRPM8 activation by menthol, icilin and cold is differentially modulated by intracellular pH.* *J. Neurosci.* **24** 5364
- 3) Story *et al.* (2003) *ANKTM1, a TRP-like channel expressed in nociceptive neurons, is activated by cold temperatures.* *Cell* **112** 819
- 4) Chuang *et al.* (2004) *The super-cooling agent icilin reveals a mechanism of coincidence detection by a temperature-sensitive TRP channel.* *Neuron* **43** 859
- 5) Kim *et al.* (2011) *Icilin induces G1 arrest through activating JNK and p38 kinase in a TRPM8-independent manner.* *Biochem. Biophys. Res. Commun.* **406** 30

**PHYSICAL DATA**

Molecular Weight:	311.29
Molecular Formula:	$\text{C}_{16}\text{H}_{13}\text{N}_3\text{O}_4$
Purity:	>98% (TLC: 5% Methanol/methylene chloride; $R_f = 0.40$ )
Solubility:	DMSO (at least 25 mg/ml)
Physical Description:	Yellow solid
Storage and Stability:	Store as supplied at $-20^\circ\text{C}$ for up to one year from the date of purchase. Solutions in DMSO may be stored at $-20^\circ\text{C}$ for up to 3 months

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