



LKT Laboratories, Inc.

Icilin

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## Product Information

Product ID I0933

CAS No. 36945-98-9

### Chemical Name

Synonym AG 3-5

Formula  $C_{16}H_{13}N_3O_4$

Formula Wt. 311.3

### Melting Point

Purity  $\geq 98\%$

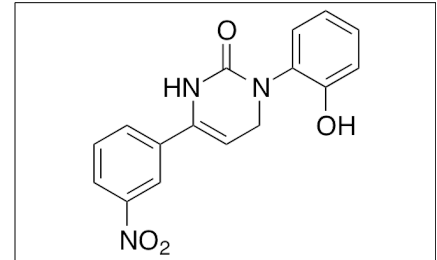
Solubility Soluble in water (0.1 mg/ml) at 25° C, DMSO:PBS pH 7.2 (1:5), DMSO (50 mg/ml), and DMF.

Store Temp -20° C

Ship Temp Ambient

### Description

Icilin is an agonist at transient receptor potential melastatin 8 (TRPM8) channels; it may block transient receptor potential vanilloid 3 (TRPV3) channels. Icilin displays both hyperalgesic and analgesic activities as well as anti-inflammatory and anticancer properties. Activation of TRPM8 channels induces hyperalgesia and allodynia, but long-term activation desensitizes the channels to induce pain relief. Like menthol, icilin acts as a cooling agent, as TRPM8 channels are cold-sensitive. In animal models of colitis, icilin decreases levels of pro-inflammatory cytokines. Icilin inhibits cell motility in pancreatic ductal adenocarcinoma cells and also decreases levels of E2F1 and induces G1 phase cell cycle arrest in prostate cancer cells.



**Bulk quantities available upon request**

Product ID	Size
I0933	5 mg
I0933	10 mg
I0933	50 mg

**References** Burgos-Vega CC, Ahn DD, Bischoff C, et al. Meningeal transient receptor potential channel M8 activation causes cutaneous facial and hindpaw allodynia in a preclinical rodent model of headache. *Cephalalgia*. 2015 May 5. [Epub ahead of print]. PMID: 25944818.

Hosoya T, Matsumoto K, Tashima K, et al. TRPM8 has a key role in experimental colitis-induced visceral hyperalgesia in mice. *Neurogastroenterol Motil*. 2014 Aug;26(8):1112-21. PMID: 24832648.

Cucu D, Chiritoiu G, Petrescu S, et al. Characterization of functional transient receptor potential melastatin 8 channels in human pancreatic ductal adenocarcinoma cells. *Pancreas*. 2014 Jul;43(5):795-800. PMID: 24658318.

Hagenacker T, Lampe M, Schäfers M. Icilin reduces voltage-gated calcium channel currents in naïve and injured DRG neurons in the rat spinal nerve ligation model. *Brain Res*. 2014 Apr 4;1557:171-9. PMID: 24560602.

Lee S, Chun JN, Kim SH, et al. Icilin inhibits E2F1-mediated cell cycle regulatory programs in prostate cancer. *Biochem Biophys Res Commun*. 2013 Nov 29;441(4):1005-10. PMID: 24239550.

Ramachandran R, Hyun E, Zhao L, et al. TRPM8 activation attenuates inflammatory responses in mouse models of colitis. *Proc Natl Acad Sci U S A*. 2013 Apr 30;110(18):7476-81. PMID: 23596210.

Sherkheli MA, Gisselmann G, Hatt H. Supercooling agent icilin blocks a warmth-sensing ion channel TRPV3.

**Caution:** This product is intended for laboratory and research use only. It is not for human or drug use.