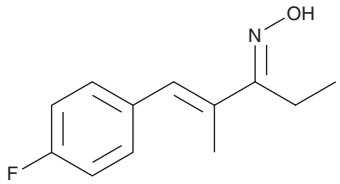
PRODUCT INFORMATION

A-967079

Item No. 15207

CAS Registry No.:	170613-55-4
Formal Name:	(1E,3E)-1-(4-fluorophenyl)-2-methyl-1-penten-3-one oxime
MF:	$C_{12}H_{14}FNO$
FW:	207.3
Purity:	≥98%
UV/Vis.:	λ_{max}: 267 nm
Supplied as:	A crystalline solid
Storage:	-20°C
Stability:	≥4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

A-967079 is supplied as a crystalline solid. A stock solution may be made by dissolving the A-967079 in the solvent of choice. A-967079 is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF), which should be purged with an inert gas. The solubility of A-967079 in ethanol and DMF is approximatel 20 mg/ml and approximately 30 mg/ml in DMSO.

A-967079 is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, A-967079 should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. A-967079 has a solubility of approximately 0.3 mg/ml in a 1:2 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

The transient receptor potential ankyrin 1 (TRPA1) ion channel integrates the nociception and transmission of diverse potentially damaging and noxious stimuli, including cold, electrophilic compounds, divalent cations, and mechanical stimulation.[1,2] A-967079 is a potent, selective, and bioavailable inhibitor of the TRPA1 channel, with IC_{50} values of 67 and 289 nM for the human and rat isoforms, respectively.[3] It attenuates cold allodynia following nerve injury without producing locomotor or cardiovascular side effects.[3] A-967079 also suppresses neuronal activity in response to mechanical stimulation and diminishes postoperative pain due to mechanical stimuli.[2,4]

References

1. Klement, G., Eisele, L., Malinowsky, D., *et al.* Characterization of a ligand binding site in the human transient receptor potential ankyrin 1 pore. *Biophys. J.* **104(4)**, 798-806 (2013).
2. Wei, H., Karimaa, M., Korjamo, T., *et al.* Transient receptor potential ankyrin 1 ion channel contributes to guarding pain and mechanical hypersensitivity in a rat model of postoperative pain. *Anesthesiology* **117(1)**, 137-148 (2012).
3. Chen, J., Joshi, S.K., DiDomenico, S., *et al.* Selective blockade of TRPA1 channel attenuates pathological pain without altering noxious cold sensation or body temperature regulation. *Pain* **152(5)**, 1165-1172 (2011).
4. McGaraughty, S., Chu, K.L., Perner, R.J., *et al.* TRPA1 modulation of spontaneous and mechanically evoked firing of spinal neurons in uninjured, osteoarthritic, and inflamed rats. *Mol. Pain* **6**, 14 (2010).

CAYMAN CHEMICAL
1180 EAST ELLSWORTH RD
ANN ARBOR, MI 48108 · USA
PHONE: [800] 364-9897
[734] 971-3335
FAX: [734] 971-3640
CUSTSERV@CAYMANCHEM.COM
WWW.**CAYMANCHEM**.COM