

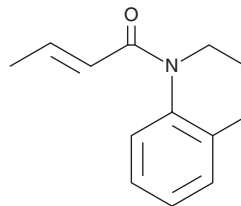
PRODUCT INFORMATION



Crotamiton

Item No. 23943

CAS Registry No.: 483-63-6
Formal Name: N-ethyl-N-(2-methylphenyl)-2-butenamide
Synonym: N-Ethyl-o-Crotonotoluidide
MF: C₁₃H₁₇NO
FW: 203.3
Purity: ≥95%
UV/Vis.: λ_{max}: 205, 208 nm
Supplied as: A neat oil
Storage: -20°C
Stability: ≥4 years



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

Laboratory Procedures

Crotamiton is supplied as a neat oil. A stock solution may be made by dissolving the crotamiton in the solvent of choice, which should be purged with an inert gas. Crotamiton is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of crotamiton is approximately 50 mg/ml in ethanol and approximately 100 mg/ml in DMSO and DMF.

Crotamiton is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, crotamiton should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. Crotamiton has a solubility of approximately 0.5 mg/ml in a 1:1 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

Crotamiton is an ectoparasiticide and antipruritic agent.¹⁻³ It blocks the mouse transient receptor potential vanilloid 4 (TRPV4) channel expressed in HEK293 cells in a calcium-dependent manner (IC₅₀s = 223.5 and 15.5 μM in buffer containing 0 and 2 mM calcium, respectively).² It inhibits scratching behavior in mice induced by the TRPV4 agonist GSK1016790A (Item No. 17289). Topical application of crotamiton (0.025 g of a 10% ointment) also inhibits scratching behavior in mice induced by histamine, serotonin (Item No. 14332), and the proteinase-activated receptor 2 (PAR2) agonist SLIGRL-NH₂ (Item No. 16723).³ Formulations containing crotamiton have been used to eradicate scabies and in the treatment of symptomatic pruritic skin.

References

1. Goldust, M. Rezaee, E., and Raghiafar, R. Topical ivermectin versus crotamiton cream 10% for the treatment of scabies. *Int. J. Dermatol.* **53(7)**, 904-908 (2014).
2. Kittaka, H., Yamanoi, Y., and Tominaga, M. Transient receptor potential vanilloid 4 (TRPV4) channel as a target of crotamiton and its bimodal effects. *Pflugers Arch.* **469(10)**, 1313-1323 (2017).
3. Sekine, R., Satoh, T., Takaoka, A., et al. Anti pruritic effects of topical crotamiton, capsaicin, and a corticosteroid on pruritogen-induced scratching behavior. *Exp. Dermatol.* **21(3)**, 201-204 (2012).

WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the [complete](#) Safety Data Sheet, which has been sent via email to your institution.

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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