

PRODUCT INFORMATION



HC-030031

Item No. 11923

CAS Registry No.: 349085-38-7

Formal Name: 1,2,3,6-tetrahydro-1,3-dimethyl-N-[4-(1-methylethyl)phenyl]-2,6-dioxo-7H-purine-7-acetamide

MF: C₁₈H₂₁N₅O₃

FW: 355.4

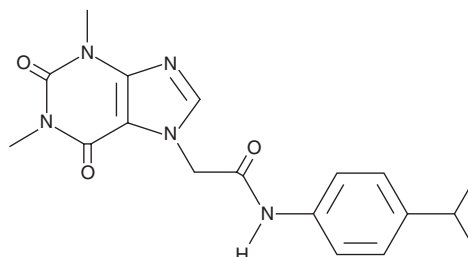
Purity: ≥98%

UV/Vis.: λ_{max}: 248 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

HC-030031 is supplied as a crystalline solid. A stock solution may be made by dissolving the HC-030031 in the solvent of choice, which should be purged with an inert gas. HC-030031 is soluble in organic solvents such as DMSO and dimethyl formamide. The solubility of HC-030031 in these solvents is approximately 10 and 20 mg/ml, respectively.

HC-030031 is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, HC-030031 should first be dissolved in DMF and then diluted with the aqueous buffer of choice. HC-030031 has a solubility of approximately 0.5 mg/ml in a 1:1 solution of DMF:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

Transient receptor potential cation channel A1 (TRPA1) is an ankyrin-like ion channel which acts as a sensor for chemical irritants, pain, and cold. It is activated by allyl isothiocyanate (AITC), formalin, hydrogen peroxide, tear gas, and other compounds.¹⁻³ HC-030031 is a selective TRPA1 blocker, antagonizing TRPA1-mediated calcium influx induced by AITC and formalin (IC₅₀s = 6.2 and 5.3 μM, respectively).² It does not block currents mediated by TRPV1, TRPV3, TRPV4 hERG, or Na_v1.2 channels.² HC-030031 can be used in cells or delivered to animals orally, by inhalation, or by injection.^{2,4-6} Oral administration (100 mg/kg) of HC-030031 significantly reversed mechanical hypersensitivity in rat models of chronic inflammatory or neuropathic pain, while local injection (100 μg) into inflamed mouse hind paws attenuated mechanical, but not heat, hypersensitivity.^{4,6}

References

1. Macpherson, L.J., Dubin, A.E., Evans, M.J., et al. *Nature* **445**(7127), 541-545 (2007).
2. McNamara, C.R., Mandel-Brehm, J., Bautista, D.M., et al. *Proc. Natl. Acad. Sci. USA* **104**(33), 13525-13530 (2007).
3. Andrade, E.L., Luiz, A.P., Ferreira, J., et al. *Neuroscience* **152**(2), 511-520 (2008).
4. Eid, S.R., Crown, E.D., Moore, E.L., et al. *Mol. Pain* **4**(48), (2008).
5. Daller, J.R., Wong, J., Brooks, B.D., et al. *J. Pharmacol. Toxicol. Methods* **66**(3), 232-237 (2012).
6. Lennertz, R.C., Kossyrev, E.A., Smith, A.K., et al. *PLoS One* **7**(8), (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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