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: C_{18}H_{21}N_{5}O_{3}
FW: 355.4
Purity: ≥98%
UV/Vis.: λ_{max}^\text{nm} 248 nm
Supplied as: A crystalline solid
Storage: -20°C
Stability: As supplied, 2 years from the QC date provided on the Certificate of Analysis, when stored properly

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. HC-030031 is soluble in organic solvents such as DMSO and dimethyl formamide, which should be purged with an inert gas. 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 (IC_{50} = 6.2 and 5.3 μM, respectively).\(^2\) It does not block currents mediated by TRPV1, TRPV3, TRPV4 hERG, or Na\(_V\)1.2 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