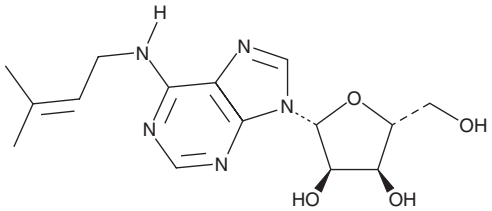
PRODUCT INFORMATION

N^6-(Δ^2-Isopentenyl)adenosine

Item No. 20522

CAS Registry No.: 7724-76-7
Formal Name: N-(3-methyl-2-buten-1-yl)-adenosine
Synonyms: 2-iPA, Isopentenyladenosine, N^6-Isopentenyladenine riboside, N^6-Isopentenyladenosine, N^6-(2-Isopentenyl)adenosine, NSC 105546, Riboprine, SQ 22,558
MF: $C_{15}H_{21}N_5O_4$
FW: 335.4
Purity: ≥98%
UV/Vis.: λ_{max}: 211, 268 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

N^6-(Δ^2-Isopentenyl)adenosine is supplied as a crystalline solid. A stock solution may be made by dissolving the N^6-(Δ^2-isopentenyl)adenosine in the solvent of choice, which should be purged with an inert gas. N^6-(Δ^2-Isopentenyl)adenosine is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of N^6-(Δ^2-isopentenyl)adenosine in these solvents is approximately 1, 5, and 10 mg/ml, respectively.

N^6-(Δ^2-Isopentenyl)adenosine is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, N^6-(Δ^2-isopentenyl)adenosine should first be dissolved in DMF and then diluted with the aqueous buffer of choice. N^6-(Δ^2-Isopentenyl)adenosine has a solubility of approximately 0.25 mg/ml in a 1:3 solution of DMF:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

N^6-(Δ^2-Isopentenyl)adenosine is a precursor in the biosynthesis of the plant hormone N^6-(Δ^2-isopentenyl) adenine (Item No. 17906).[1] N^6-(Δ^2-Isopentenyl)adenine may be converted to the cytokinin *trans*-zeatin (Item No. 13226) by cytochrome P450 mono-oxygenases.[1] Cytokinins, including N^6-(Δ^2-isopentenyl)adenine and *trans*-zeatin, regulate diverse events in plant growth and development. N^6-(Δ^2-Isopentenyl)adenosine can also alter post-transcriptional processes in mammalian cells, altering proliferation and apoptosis.[2,3]

References

1. Hirose, N., Takei, K., Kuroha, T., *et al.* Regulation of cytokinin biosynthesis, compartmentalization and translocation. *J. Exp. Bot.* **59(1)**, 75-83 (2008).
2. Bifulco, M., Malfitano, A.M., Proto, M.C., *et al.* Biological and pharmacological roles of N6-isopentenyladenosine: An emerging anticancer drug. *Anticancer Agents Med. Chem.* **8(2)**, 200-2004 (2008).
3. Casati, S., Ottria, R., Baldoli, E., *et al.* Effects of cytokinins, cytokinin ribosides and their analogs on the viability of normal and neoplastic human cells. *Anticancer Res.* **31(10)**, 3401-3406 (2011).

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