

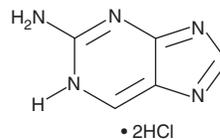
PRODUCT INFORMATION



2-Aminopurine (hydrochloride)

Item No. 18609

CAS Registry No.: 1428126-74-2
Formal Name: 9H-purin-2-amine, dihydrochloride
Synonym: 2-AP
MF: C₅H₅N₅ • 2HCl
FW: 208.1
Purity: ≥98%
Ex./Em. Max: 320/381 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

2-Aminopurine is supplied as a crystalline solid. Aqueous solutions of 2-Aminopurine can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of 2-Aminopurine in PBS, pH 7.2, is approximately 5 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

2-Aminopurine is a fluorescent analog of guanosine and adenosine that is used as a site-specific probe of nucleic acid structure and dynamics.¹ It base pairs with cytosine in a wobble configuration or with thymine in a Watson-Crick geometry.¹ In addition to its usefulness in studies of base stacking interactions, 2-aminopurine has been used as a probe for DNA base flipping by methyl transferases.² 2-Aminopurine exhibits an excitation/emission of 320/381 nm, respectively, when adjusted to reduce interference with DNA base absorption as well as tryptophan fluorescence.² 2-Aminopurine inhibits the double-stranded RNA-dependent protein kinase, protein kinase R, whose activity mediates antiviral defense and participates in toll-like receptor signaling.³

References

1. Jean, J.M., and Hall, K.B. 2-Aminopurine fluorescence quenching and lifetimes: Role of base stacking. *Proc. Nat. Acad. Sci. USA* **98(1)**, 37-41 (2001).
2. Holz, B., Klimasauskas, S., Serva, S., et al. 2-Aminopurine as a fluorescent probe for DNA base flipping by methyltransferases. *Nucleic Acids Res.* **26(4)**, 1076-1083 (1998).
3. Endoh, Y., Chung, Y.M., Clark, I.A., et al. IL-10-dependent S100A8 gene induction in monocytes/macrophages by double-stranded RNA. *J. Immunol.* **182(4)**, 2258-2268 (2009).

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