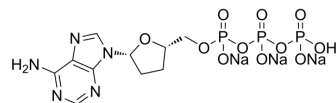


## ddATP trisodium

<b>Cat. No.:</b>	HY-128036B
<b>CAS No.:</b>	72029-21-1
<b>Molecular Formula:</b>	C <sub>10</sub> H <sub>13</sub> N <sub>5</sub> Na <sub>3</sub> O <sub>11</sub> P <sub>3</sub>
<b>Molecular Weight:</b>	541.13
<b>Target:</b>	DNA/RNA Synthesis; HIV
<b>Pathway:</b>	Cell Cycle/DNA Damage; Anti-infection
<b>Storage:</b>	Solution, -20°C, 2 years



### BIOLOGICAL ACTIVITY

<b>Description</b>	ddATP (2',3'-Dideoxyadenosine 5'-triphosphate) trisodium, an active metabolite of 2',3'-dideoxyinosine, is a chain-elongating inhibitor of DNA polymerase. ddATP trisodium can be used for Sanger method for DNA sequencing and research of virus infection <sup>[1][2][4]</sup> .								
<b>In Vitro</b>	<p>ddATP (0.05-50 μM, 30 min) trisodium inhibits adenovirus DNA synthesis in isolated nuclei from adenovirus-infected KB cells<sup>[1]</sup>.</p> <p>ddATP (100 μM, 5 h) trisodium reduces the number of γH2A.X foci in the DSB (DNA double-strand breaks) oocytes<sup>[3]</sup>.</p> <p>ddATP trisodium inhibits HIV replication by inhibiting HIV reverse transcriptase<sup>[5]</sup>.</p> <p>MCE has not independently confirmed the accuracy of these methods. They are for reference only.</p> <p>Immunofluorescence<sup>[3]</sup></p> <table border="1"> <tr> <td>Cell Line:</td> <td>DSB oocytes</td> </tr> <tr> <td>Concentration:</td> <td>100 μM</td> </tr> <tr> <td>Incubation Time:</td> <td>5 h</td> </tr> <tr> <td>Result:</td> <td>Suppressed the mtDNA replication without fully suppressed the nuclear DNA replication.</td> </tr> </table>	Cell Line:	DSB oocytes	Concentration:	100 μM	Incubation Time:	5 h	Result:	Suppressed the mtDNA replication without fully suppressed the nuclear DNA replication.
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### REFERENCES

- [1]. van der Vliet PC, et al. Role of DNA polymerase gamma in adenovirus DNA replication. Mechanism of inhibition by 2',3'-dideoxynucleoside 5'-triphosphates. *Biochemistry*. 1981 Apr 28;20(9):2628-32.
- [2]. Xu Lan, et al. Simultaneous determination of 2',3'-dideoxyinosine and the active metabolite, 2',3'-dideoxyadenosine-5'-triphosphate in human peripheral-blood mononuclear cell by HPLC-MS/MS and the application to cell pharmacokinetics. *J Chromatogr B Analyt Technol Biomed Life Sci*. 2015 Oct 1;1002:337-42.
- [3]. Jun-Yu Ma, et al. Double-strand breaks induce short-scale DNA replication and damage amplification in the fully grown mouse oocytes. *Genetics*. 2021 Jun 24;218(2):iyab054.
- [4]. C M Perry, et al. Didanosine. An update on its antiviral activity, pharmacokinetic properties and therapeutic efficacy in the management of HIV disease. *Drugs*. 1996 Dec;52(6):928-62.

**Caution: Product has not been fully validated for medical applications. For research use only.**

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