DATA SHEET

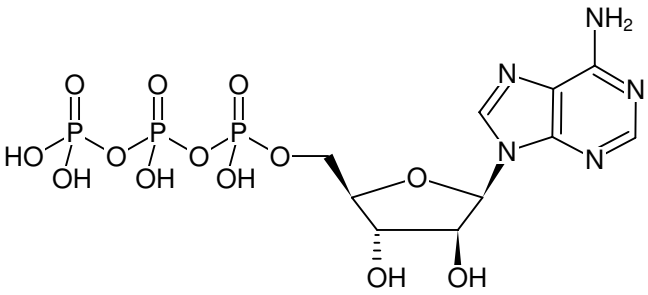
Jena Bioscience

ara-Adenosine-5'-triphosphate (*ara*-ATP)

Vidarabine triphosphate, Sodium Salt

Adenine-arabinofuranoside-5'-triphosphate, Sodium salt

Cat. No.	Amount
NU-1111S	50 µl (10 mM)
NU-1111L	5 x 50 µl (10 mM)



Structural formula of *ara*-Adenosine-5'-triphosphate (*ara*-ATP)

For general laboratory use.

Shipping: shipped on gel packs

Storage Conditions: store at -20 °C

Short term exposure (up to 1 week cumulative) to ambient temperature possible.

Shelf Life: 12 months after date of delivery

Molecular Formula: $C_{10}H_{16}N_5O_{13}P_3$ (free acid)

Molecular Weight: 507.18 g/mol (free acid)

Exact Mass: 507.00 g/mol (free acid)

CAS#: 3714-60-1

Purity: ≥ 95 % (HPLC)

Form: solution in water

Color: colorless to slightly yellow

Concentration: 10 mM - 11 mM

pH: 7.5 ±0.5

Spectroscopic Properties: λ_{max} 259 nm, ε 15.3 L $mmol^{-1}$ cm^{-1} (Tris-HCl pH 7.5)

Applications:

Isolation from marine sponge Tethya crypta[1]

Antiviral properties[2]

Substrate for poly(A) polymerase (gammaPAP)[3]

Selected References:

[1] Sagar *et al.* (2010) Antiviral lead compounds from marine sponges. *Mar. Drugs.* **8 (10)**:2619.

[2] Wilhelmus (2010) Antiviral treatment and other therapeutic interventions for herpes simplex virus epithelial keratitis. *Cochrane Database Syst Rev.* **(12)**:CD002898.

[3] Chen *et al.* (2008) Polyadenylation inhibition by the triphosphates of deoxyadenosine analogues. *Leuk. Res.* **32 (10)**:1573.

Genini *et al.* (2000) Nucleotide requirements for the in vitro activation of the apoptosis protein-activating factor-1-mediated caspase pathway. *J. Biol. Chem.* **275 (1)**:29.

Ghoshal *et al.* (1991) Ara-ATP impairs 3'-end processing of pre-messenger-RNAs by inhibiting both cleavage and polyadenylation. *Nucleic Acids Res.* **19 (21)**:5871.

Biron *et al.* (1991) Selective anabolism of 6-methoxypurine arabinoside in Varicella-zoster virus-infected cells. *Antimicrob. Agents Ch.* **35 (10)**:2116.

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Plunkett *et al.* (1981) Cellular concentrations of dATP and ara-ATP in peripheral-blood leukemic-cells (PBC) and erythrocytes (RBC) from patients treated with deoxycoformycin (DCF) or Arabinosyladenine (ara-A). *P. Am. Assoc. Canc. Res.* **22 (Mar)**:177.

Shewach *et al.* (1981) Relationship between ara-ATP concentration, DNA synthetic capacity (DSC) and viability in cho cells. *P. Am. Assoc. Canc. Res.* **22 (Mar)**:255.

Spater *et al.* (1981) Neuronal phosphatase-activities with ara-AMP and ara-ATP as substrates. *J. Histochem. Cytochem.* **29 (6)**:693.

Chanda *et al.* (1980) Inhibition of vesicular stomatitis-virus transcriptase invitro by phosphonoformate and ara-ATP. *Virology* **107 (2)**:562.

Dennis *et al.* (1980) RNA-polymerase - potent linear competitive-inhibition by D Arabinose-5-triphosphate compared to non-inhibition by 5' ara-ATP. *Biochem. Bioph. Res. Co.* **94 (1)**:205.

Shewach *et al.* (1979) Effect of deoxycoformycin (DCF) on the toxicity and metabolism of 9-beta-d-arabinofuranosyladenine (ara-A) and its 5'-triphosphate (ara-ATP) in cho cells. *P. Am. Assoc. Canc. Res.* **20 (Mar)**:183.

Chanda *et al.* (1979) Inhibition of invitro RNA-transcription of vesicular stomatitis-virus by phosphonoformate and ara-ATP. *Fed. Proc.* **38 (3)**:814.

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Rose *et al.* (1978) Selective-inhibition of RNA polyadenylation by ara-ATP invitro - possible mechanism for anti-viral action of ara-A. *Biochem. Bioph. Res. Co.* **81 (4)**:1418.

Ortiz (1972) Inhibition of escherichia-coli adenyl-cyclase by ara ATP. *Biochem. Bioph. Res. Co.* **46 (4)**:1728.