DATA SHEET

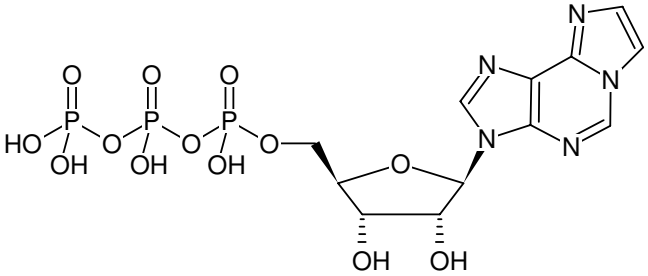
Jena Bioscience

Etheno-ATP (ε-ATP)

(1,N^6-Etheno-ATP)

1,N^6-Etheno-adenosine-5'-triphosphate, Sodium salt

Cat. No.	Amount
NU-1103S	500 µl (10 mM)
NU-1103L	5 x 500 µl (10 mM)



Structural formula of Etheno-ATP (ε-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: $C_{12}H_{16}N_5O_{13}P_3$ (free acid)

Molecular Weight: 531.20 g/mol (free acid)

Exact Mass: 531.00 g/mol (free acid)

CAS#: 60777-99-3

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} 275 nm, ε 6.0 L $mmol^{-1}$ cm^{-1} (Tris-HCl pH 7.5), λ_{exc} 300 nm, λ_{em} 415 nm

Applications:

Fluorescence quenching[1]

Exchange rate from G-actin and wild type[2]

FRET-studies on conformational changes[3]

Formation in erythrocytes andendothelial cells[4]

Fluorescence anisotropy changes during protein binding[5]

Influence on centromeric binding protein E associated activity[6]

Specific Ligands:

Yeast and muscle actins[7]

Coflin and profilin[8]

P2Y receptor in cardiac endothelial cells[9]

Selected References:

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[3] Dedova *et al.* (2006) Thymosin β4 induces a conformational change in actin monomers. *Biophysical J.* **90**:985.

[4] Mattig *et al.* (2003) Modulation of adenine nucleotide concentrations in human plasma by erythrocytes and endothelial cells. *Thrombosis Res.* **110**:195.

[5] Suarez *et al.* (202) Biochemical defects in retina-specific human ATP binding cassette transporter nucleotide binding domain 1 mutants associated with macular degeneration. *J. Biol. Chem.* **277**:21759.

[6] Thrower *et al.* (1995) Mitotic HeLa cells contain a CENP-E associated minus end-directed microtubule motor. *EMBO Journal* **14**:918.

[7] Wen *et al.* (2008) Control of the ability of profilin to bind and facilitate nucleotide exchange from G-actin. *J. Biol. Chem.* **283**:9444.

[8] Kardos *et al.* (2009) The effects of ADF/cofilin and profilin on the conformation of the ATP-binding cleft of monomeric actin. *Biophysical J.* **96**:2335.

[9] Yang *et al.* (1994) Purinergic axis in cardiac blood vessels: Agonist mediated release of ATP from cardiac endothelial cells. *Circ. Res.* **74 (3)**:401.

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Burtnick *et al.* (1979) Circular-polarization of the fluorescence of Actin-bound epsilon-ATP - effects of binding DNAse-I. *FEBS Lett.* **97 (1)**:166.

Kaplan *et al.* (1976) Mitochondrial ATPase activity and adenine-nucleotide transport with epsilon-ATP. *J. Cell Biol.* **70 (2)**:a414.

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