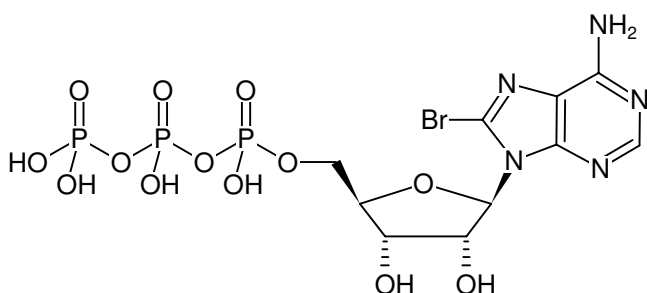


**8-Bromo-ATP**

(8Br-ATP)

8-Bromo-adenosine-5'-triphosphate, Sodium salt

Cat. No.	Amount
NU-997-20	20 mg
NU-997-100	100 mg



Structural formula of 8-Bromo-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:** C₁₀H₁₅N₅O₁₃P₃Br (free acid)**Molecular Weight:** 586.08 g/mol (free acid)**Exact Mass:** 584.91 g/mol (free acid)**CAS#:** 81035-56-5**Purity:** ≥ 95 % (HPLC)**Form:** solid**Color:** white to off-white**Spectroscopic Properties:** λ_{max} 264 nm, ε 17.0 L mmol⁻¹ cm⁻¹ (Tris-HCl pH 7.5)**Applications:**Agonistic ligand, mainly for nucleoside receptor A₁, with less affinity to A₃

Nucleoside-triphosphates can be converted by different membrane-bound phosphatases into nucleosides acting as nucleoside receptor ligands. In some cases nucleoside phosphates act also directly on nucleoside receptors.

Specific Ligands:

Ligand for purinergic receptors:

P2Y₂^[1]P2X purinoreceptor^[2]**Selected References:**[1] Lazarowski *et al.* (1995) Pharmacological selectivity of cloned human P2U-purinoreceptor: potent activation by diadenosine tetraphosphate. *Br. J. Pharmacol.* **116** (1):1619.[2] Bo *et al.* (1994) Comparative studies on affinities of ATP derivatives for P2X-purinoreceptors in rat urinary bladder. *Br. J. Pharmacol.* **112** (4):1151.Volonte *et al.* (2009) Membrane components and purinergic signalling: the purinome, a complex interplay among ligands, degrading enzymes, receptors and transporters. *FEBS J.* **276**:318.Yegutkin (2008) Nucleotide and nucleoside converting enzymes: Important modulators of purinergic signalling cascade. *Biochim. Biophys. Acta* **1783**:673.Carrasco *et al.* (1998) Interaction of adenosine nucleotide analogs with *Saccharomyces cerevisiae* phosphoenolpyruvate carboxykinase. *BBA-Protein Struct. M.* **1429** (1):93.Maruta *et al.* (1998) Characterization of the interaction of myosin with ATP analogues having the syn conformation with respect to the adenine-ribose bond. *Eur. J. Biochem.* **256** (1):229.Beukers *et al.* (1993) Characterization of ecto-ATPase on human blood-cells - a physiological-role in platelet-aggregation. *Biochem.Pharmacol.* **46** (11):1959.Juodka *et al.* (1993) Substrate-specificity of T4 RNA-ligase - role of the purine base of the nucleotide in formation of the covalent AMPRNA-ligase complex. *Biochemistry-Moscow* **58** (6):576.Homas *et al.* (1991) A receptor that is highly specific for extracellular ATP in developing chick skeletal-muscle invitro. *Brit. J. Pharmacol.* **103** (4):1963.Champeil *et al.* (1988) ATP regulation of sarcoplasmic-reticulum Ca²⁺-ATPase - metal-free ATP and 8-bromo-ATP bind with high-affinity to the catalytic site of phosphorylated ATPase and accelerate dephosphorylation. *J. Biol. Chem.* **263** (25):12288.Szilagy *et al.* (1988) Effect of 8-Br-ATP as a bound nucleotide on the molecular-dynamics of actin. *J. Muscle Res. Cell M.* **9** (1):93.Kuryav *et al.* (1987) Influence of 8-Br-ATP and 8-Oxy-ATP on rna-synthesis by



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escherichia-coli rna-polymerase. *Biochemistry-Moscow* **52 (1)**:127.

Kuryavy *et al.* (1984) Effect of 8-Bromo-ATP on RNA-synthesis by Escherichia-coli RNA-polymerase invitro. *Stud. Biophys.* **101**:165.

Bruskov *et al.* (1982) Recognition of 8-Bromo-ATP in the RNA-polymerase reaction. *Stud. Biophys.* **87 (2)**:173.

Nagel *et al.* (1976) Chromatographic investigation of substrate properties of 8-Bromo-ATP in nucleoside diphosphate kinase reaction. *J. Clin. Chem. Clin. Bio.* **14 (9)**:429.