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- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

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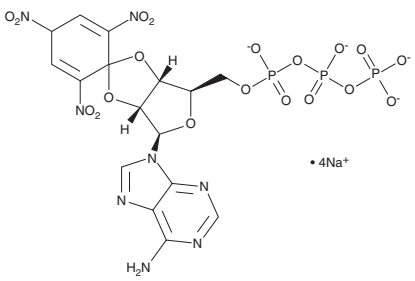
PRODUCT INFORMATION

TNP-ATP (sodium salt)

Item No. 38492

Formal Name:	((3a'R,4'R,6'R,6a'R)-4'-(6-amino-9H-purin-9-yl)-2,4,6-trinitro-3a',4',6',6a'-tetrahydrospiro[cyclohexane-1,2'-furo[3,4-d][1,3]dioxole]-2,5-dien-6'-yl) methyl triphosphate, tetrasodium salt
MF:	$C_{16}H_{13}N_8O_{19}P_3 \bullet 4Na$
FW:	806.2
Purity:	≥95%
Supplied as:	A solution in water
Storage:	-80°C
Stability:	≥2 years
Ex./Em. Max.:	403/547 nm



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Description

TNP-ATP is a derivative of ATP and an antagonist of the purinergic $P2Y_1$, $P2X_3$, and $P2X_{2/3}$ receptors (IC_{50}s = 6, 0.9, and 7 nM, respectively, in HEK293 cells expressing the human receptors).[1] It is selective for these receptors over the purinergic $P2X_2$, $P2X_4$, and $P2X_7$ receptors (IC_{50}s = 2, 15.2, and >30 µM, respectively, in HEK293 cells expressing the human receptors). TNP-ATP decreases acetic acid-induced calcium flux in 1321N1 cells expressing the $P2X_3$ and $P2X_{2/3}$ receptors (IC_{50}s = 100 and 62 nM, respectively).[2] It reduces acetic acid-induced writhing in a mouse model of visceral pain (ED_{50}= 6.35 µmol/kg). It displays excitation/emission maxima of 403 and 547 nm, respectively, and its relative fluorescence increases four-fold when bound to insulin-degrading enzyme (IDE) with an emission maximum of 538 nm.[3]

References

1. Virginio, C., Robertson, G., Surprenant, A., *et al.* Trinitrophenyl-substituted nucleotides are potent antagonists selective for $P2X_1$, $P2X_3$, and heteromeric $P2X_{2/3}$ receptors. *Mol. Pharmacol.* **53(6)**, 969-973 (1998).
2. Honore, P., Mikusa, J., Bianchi, B., *et al.* TNP-ATP, a potent $P2X_3$ receptor antagonist, blocks acetic acid-induced abdominal constriction in mice: Comparison with reference analgesics. *Pain* **96(1-2)**, 99-105 (2002).
3. Yao, H. and Hersh, L.B. Characterization of the binding of the fluorescent ATP analog TNP-ATP to insulysin. *Arch. Biochem. Biophys.* **451(2)**, 175-181 (2006).

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