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Technical Information about Sp-dATP-α-S

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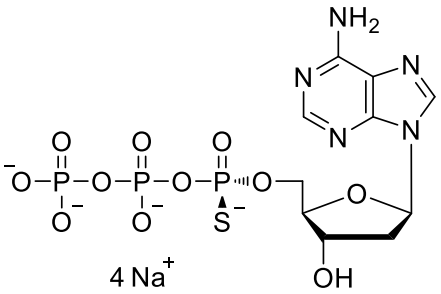

Abbreviation: **Sp-dATP-α-S**

Formula	CAS No.	Molecular Weight	UV	BIOLOG Cat. No.
$C_{10}H_{16}N_5O_{11}P_3S$ (free acid)	[80875-87-2]	507.3 (free acid)	λ_{max} 259 nm / ε 15200 / pH 7	D 007

Name: 2'- Deoxyadenosine- 5'- O- (1- thiotriphosphate), Sp- isomer

Description: Sp-dATP-α-S is a modification of 2'-deoxyadenosine triphosphate (dATP), where one of the non-bridging oxygens in the S position of the α-phosphate is replaced by sulfur. The suffix "p" indicates that R/S nomenclature refers to phosphorus. The corresponding Rp-isomer is offered as well (Cat. No. D 006).

Properties:

- Increased metabolic stability compared to dATP,
- useful for modulation of dATP-responsive receptors and determination of their stereospecificity,
- accepted by DNA polymerase for incorporation of phosphorothioate into DNA,
- useful for Pyrosequencing techniques.

Specification: Aqueous solution of the sodium salt (10 mM). Other salt forms of Sp-dATP-α-S are available upon request. Micromolar quantities are determined by UV at $\lambda_{max.}$ When opening the tube please make sure that no liquid is lost within the cap. A short spin-down in a bench centrifuge is recommended before use.

Purity: Typical purity is better than 98% (HPLC / UV / 259 nm) at time of quality control and packing. However, actual purity depends on storage and transport conditions. The product is not sterile and has not been tested for endotoxins.

Stability and Storage: Sp-dATP-α-S is relatively stable when stored as aqueous solution in the freezer (-20° Celsius necessary, -80° recommended), however, at ambient temperature the compound slowly starts to decompose forming dATP and other nucleotide fragments. Thus, in order to maintain its original high quality, and especially if you want to avoid the presence of any dATP, it is recommended to allow thawing only before using the product. If you will not use up the vial with one application, please aliquot the contents of the vial in order to avoid repeated freeze/thaw cycles for the rest. When making such aliquots be sure to operate quickly and to freeze the vial again as soon as possible. Please ask for an offer to already pack these aliquots as you will need them.

Toxicity and Safety: Since dATP has important tasks in every organism, it is very likely that dATP analogues will interfere with many cell regulation processes *in vivo*. However, due to the rather small quantities to work with, no health hazards have been reported. Nevertheless please keep in mind, that the *in vivo* properties of this compound are not sufficiently characterized up to now. Avoid skin contact or ingestion and allow only trained personnel to handle the product.
Our products are designed, developed and sold for research purposes only! They are intended for *in vitro* and nonhuman *in vivo* laboratory applications. Any other use requires approval of health authorities.
Not for drug, household or related uses!

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For a detailed list please inquire or visit our website (http://www.biolog.de)

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