Technical Information about
2'-Deoxy-2'-fluoroadenosine-5'-O-triphosphate

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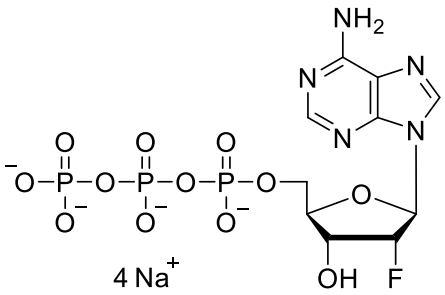

Abbreviation: **2'-F-ATP**

Formula	CAS No.	Molecular Weight	UV	BIOLOG Cat. No.
$C_{10}H_{15}FN_5O_{12}P_3$ (for free acid)	[73449-07-7]	509.2 (for free acid)	λ_{max} 259 nm / ε 15000 / pH 7	D 074

Name: 2'- Deoxy- 2'- fluoroadenosine- 5'- O- triphosphate

Description: 2'-F-ATP is an analogue of adenosine-5'-O-triphosphate (ATP) in which the ribose 2'-hydroxyl group is replaced by fluorine.

Properties: 2'-F-ATP is an analogue of ATP for receptor mapping. It can substitute for dATP using DNA polymerase α and γ, but not with DNA polymerase β.

Specification: Aqueous solution of the sodium salt (10 mM). Other salt forms of 2'-F-ATP are available upon request. Micromolar quantities are determined by UV at λ_{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 95% (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: 2'-F-ATP is most stable when stored as aqueous solution in the freezer (-20° Celsius necessary, -80° recommended), however, at ambient temperature the compound slowly starts to decompose. Thus, in order to maintain its original high quality 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.

Toxicity and Safety: Since triphosphates have multiple tasks in every organism, it is very likely that ATP 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!

Selected References for 2'-F-ATP:

Richardson, F.C.; Kuchta, R.D.; Mazurkiewicz, A.; Richardson, K.A., *Biochem. Pharmacol.*, **59**, 1045 - 1052 (2000): "Polymerization of 2'-Fluoro- and 2'-O-Methyl-dNTPs by Human DNA Polymerase Alpha, Polymerase Gamma, and Primase"

Ono, T.; Scalf, M.; Smith, L.M.; *Nucleic Acids Res.*, **25**, 4581 - 4588 (1997): "2'-Fluoro Modified Nucleic Acids: Polymerase-Directed Synthesis, Properties and Stability to Analysis by Matrix-assisted Laser Desorption/Ionization Mass Spectrometry"

Parker, W.B.; Bapat, A.R.; Shen, J.X.; Townsend, A.J.; Cheng, Y.C., *Mol. Pharmacol.*, **34**, 485 - 491 (1988): "Interaction of 2-Halogenated dATP Analogs (F, Cl, and Br) with Human DNA Polymerases, DNA Primase, and Ribonucleotide Reductase"

BIOLOG Life Science Institute, Bremen, Germany Phone: 49 (0) 421 591355 Fax: 49 (0) 421 5979713 e-mail: service@biolog.de