Technical Information about 5'-AMPS

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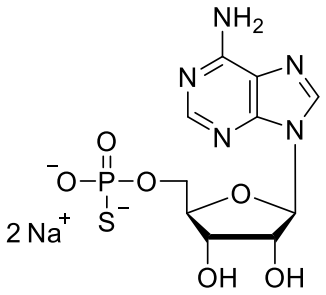

Abbreviation: **5'-AMPS**

Formula	CAS No.	Molecular Weight	UV	BIOLOG Cat. No.
$C_{10}H_{14}N_5O_6PS$ for free acid	[19341-57-2] / [93839-85-1] (Dilithium salt)	363.3 for free acid	λ_{max} 259 nm / ε 15200 / pH 7	A 005

Name: Adenosine- 5'- O- monophosphorothioate (5'-AMPS)

Description: 5'-AMPS is an analogue of adenosine-5'-O-monophosphate (5'-AMP) in which one of the oxygen atoms in the phosphate moiety has been replaced by sulfur.

Properties: 5'-AMPS is a substrate, competitive inhibitor or regulator of enzymes that interact with adenosine-5'-O-monophosphate. It can be linked to structures with SH-groups via a disulfide bond. $P2Y_{11}$ receptor antagonist.

Specification: Crystallized or lyophilized sodium salt. Other salt forms are available upon request. Equal concentrations of 5'-AMPS can appear very different in volume due to sensitivity of the lyophilized form to humidity. The compound can even contract to small volume droplets. Normally the product is located in the conical bottom of the tube. Micromolar quantities are determined by UV at λ_{max}.

Purity: Typical analysis is better than 98% (HPLC / UV / 259 nm). The product is not sterile and has not been tested for endotoxins.

Stability and Storage: 5'-AMPS has sufficient stability at room temperature and does not need special care during handling or shipment. Nevertheless, we recommend that the compound should be stored in the freezer, for longer storage periods preferably in freeze-dried form.

Toxicity and Safety: Since AMP has multiple tasks in every organism, it is not unlikely that lipophilic 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!

Solubility: Detailed information on the solubility of 5'-AMPS in water and various buffers are listed in the solubility chart below. Concentrations have been tested at ambient temperature and can be considered as minimum concentrations usually obtainable,

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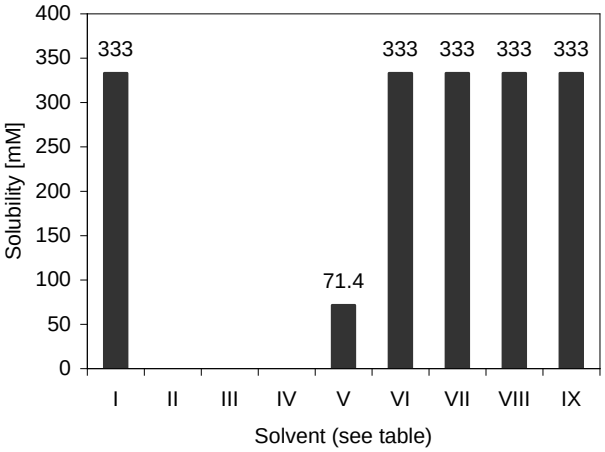
however, slight batch-to-batch variations cannot be ruled out. When opening the tube please make sure that no substance is lost within the cap. Please rinse tube walls carefully and preferably use ultrasonic or vortex to achieve total and uniform mixing.

No.	Solvent	Solubility [mM]
I	H_2O	333
II	DMSO	0
III	DMF	0
IV	Ethanol 96%	0
V	Methanol	71.4
VI	PBS, pH 7.4	333
VII	100 mM Na_2HPO_4, pH 7.0	333
VIII	25 mM Hepes/NaOH, pH 7.2	333
IX	25 mMTris/HCl, pH 7.4	333



Selected References for 5'-AMPS:

Please ask for a search in our data base for articles relevant for your field. For an extended reference list please refer to our website www.biolog.de.

Swennen, E.L.; Bast, A.; Dagnelie, P.C., *Biochem. Biophys. Res. Commun.*, **348**, 1194 - 1199 (2006): "Purinergic Receptors Involved in the Immunomodulatory Effects of ATP in Human Blood"

Conigrave, A.D.; Fernando, K.C.; Gu, B.; Tasevski, V.; Zhang, W.; Luttrell, B.M.; Wiley, J.S., *Eur. J. Pharmacol.*, **426**, 157 - 163 (2001): "P2Y11 Receptor Expression by Human Lymphocytes: Evidence for Two cAMP-linked Purinoceptors"

Murray, A.W.; Atkinson, M.R., *Biochemistry*, **7**, 4023 - 4029 (1968): "Adenosine 5'-phosphorothioate. A nucleotide analog that is a substrate, competitive inhibitor, or regulator of some enzymes that interact with adenosine 5'-phosphate

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