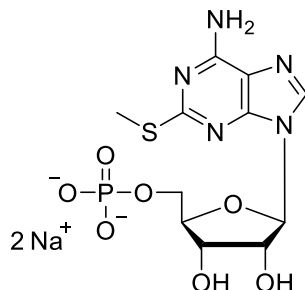


## Technical Information about 2-MeS-5'-AMP

Update: October 15, 2018 HU



**Abbreviation:** **2-MeS-5'-AMP / 2-MeSAMP**

Formula	CAS No.	Molecular Weight	UV	BIOLOG Cat. No.
C <sub>11</sub> H <sub>16</sub> N <sub>5</sub> O <sub>7</sub> PS for free acid	[22140-20-1]	393.3 for free acid	λ <sub>max</sub> 277 nm / ε 14700 / pH 11	M 031

**Name:** 2- Methylthioadenosine- 5'- O- monophosphate, sodium salt

**Description:** 2-MeS-5'-AMP is an analogue of adenosine-5'-O-monophosphate (AMP) in which the hydrogen in position 2 of the adenine nucleobase has been replaced by a methylthio group.

**Properties:** Potent adenylate cyclase-coupled platelet P2Y<sub>12</sub> ADP receptor antagonist.

**Specification:** Crystallized or lyophilized sodium salt. Other salt forms are available upon request. Equal concentrations of 2-MeS-5'-AMP 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<sub>max</sub>.

**Purity:** Typical purity is better than 97% (HPLC / UV / 277 nm) at time of quality control and packing. The product is not sterile and has not been tested for endotoxins.

**Solubility:** 2-MeS-5'-AMP is soluble to at least 85 mM in water. Please rinse tube walls carefully and preferably use ultrasonic or vortex to achieve total and uniform mixing. When opening the tube please make sure that no substance is lost within the cap.

**Stability and Storage:** 2-MeS-5'-AMP is chemically rather stable 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 nucleoside monophosphates have multiple tasks in every organism, it is very likely that AMP 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-MeS-5'-AMP:

Herfindal, L.; Nygaard, G.; Kopperud, R.; Krakstad, C.; Doeskeland, S.O.; Selheim, F., *Biochem. Biophys. Res. Commun.*, **437**, 603 - 608 (2013): "Off-target Effect of the Epac Agonist 8-pCPT-2'-O-Me-cAMP on P2Y<sub>12</sub> Receptors in Blood Platelets"

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"

Brammer, J.P., Maguire, M.H., *Br. J. Pharmacol.*, **82**, 61 - 72 (1984): "Arachidonate Metabolism, 5-Hydroxytryptamine Release and Aggregation in Human Platelets Activated by Palmitaldehyde Acetal Phosphatidic acid"