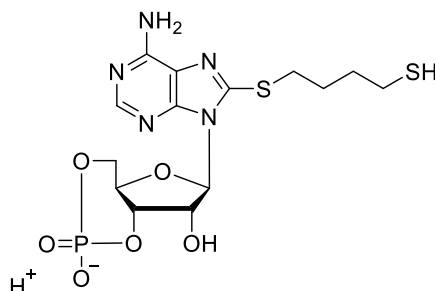


Technical Information about 8-MBT-cAMP

Functionalized cAMP for immobilization or conjugation with markers and dyes

Update: August 23, 2018 HJ



Abbreviation: 8-MBT-cAMP

Formula	CAS No.	Molecular Weight	UV	BIOLOG Cat. No.
C ₁₄ H ₂₀ N ₅ O ₆ PS ₂ (free acid)	[1033893-75-2]	449.4 (free acid)	λ _{max} 282 nm / ε 19000 / pH 7	M 080

Name: 8- (4- Mercaptobutylthio)adenosine- 3', 5'- cyclic monophosphate

Description: 8-MBT-cAMP is an analogue of the natural signal molecule cyclic AMP in which the hydrogen in position 8 of the guanine nucleobase is replaced by a mercaptobutylthio group.

Properties: 8-MBT-cAMP is a spacer-modified cAMP analogue with a terminal sulfhydryl group. It is suitable for immobilization as affinity ligand (e.g. for purification of phosphodiesterases) or for coupling of various labelling structures including fluorophores.

Caution! Be aware of the spontaneous formation of disulfides via the terminal thiol group of the spacer, which is an inherent property of 8-MBT-cAMP. To generate the free thiol group, it is highly recommended to incubate 8-MBT-cAMP with 10-100 equivalents of tris(2-carboxyethyl)phosphine (TCEP, CAS No. [51805-45-9]) prior to coupling with thiol-directed reagents, such as maleimides. TCEP does not interfere with the subsequent coupling process.

Specification: Crystallized or lyophilized triethyl ammonium salt. Other salts of 8-MBT-cAMP may be available upon request. Please keep in mind that equal concentrations of the compound may look 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 / 282 nm). The product is not sterile and has not been tested for endotoxins.

Solubility: 8-MBT-cAMP is soluble in water (≥ 20 mM, limits have not been determined). 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.

Stability and Storage: 8-MBT-cAMP 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 cAMP has multiple tasks in every organism it is very likely that cAMP 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 compounds 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!