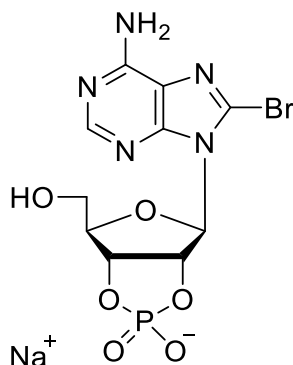


## Technical Information about 8-Br-2',3'-cAMP

Update: June 8, 2018 AI



**Abbreviation:** 8-Br-2',3'-cAMP

Formula	CAS No.	Molecular Weight	UV	BIOLOG Cat. No.
C <sub>10</sub> H <sub>10</sub> BrN <sub>5</sub> O <sub>6</sub> P · Na	[42391-15-1]	430.1	λ <sub>max</sub> 264 nm / ε 17000 / pH 7	B 280

**Name:** 8-Bromoadenosine-2', 3'-cyclic monophosphate, sodium salt

**Description:** 8-Br-2',3'-cAMP is a cyclic phosphate ester of adenosine in which both the 2'- and the 3'-hydroxy groups are esterified by phosphoric acid. In addition, the hydrogen in position 8 of the heterocyclic nucleobase is replaced by bromine.

**Properties:** 8-Br-2',3'-cAMP is considered to be a membrane-permeable analogue of 2',3'-cAMP (BIOLOG Cat. No. A 307) (Kosmacz et al. 2018). 2',3'-cAMP is a positional isomer of the natural second messenger 3',5'-cAMP (BIOLOG Cat. No. A 001) and was found to be produced by organ systems such as rat and mouse kidney and mouse brain from RNA degradation. It was also recently reported to promote the formation of stress granules in *Arabidopsis thaliana*.

**Specification:** Lyophilized or crystallized sodium salt. Other salt forms are available upon request. Equal concentrations of 8-Br-2',3'-cAMP 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 analysis is better than 97 % (HPLC / UV / 264 nm). The product is not sterile and has not been tested for endotoxins.

**Solubility:** 8-Br-2',3'-cAMP is soluble in water (≥ 28 mM, limits have not been determined). 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:** 8-Br-2',3'-cAMP has sufficient stability for short-term exposure to 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:** 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 8-Br-2',3'-cAMP:

Kosmacz, M.; Luzarowski, M.; Kerber, O.; Leniak, E.; Gutiérrez-Beltrán, E.; Moreno, J.C.; Gorka, M.; Szlachetko, J.; Veyel, D.; Graf, A.; Skiryecz, A., *Plant Physiol.*, **177**, 411 - 421 (2018): "Interaction of 2',3'-cAMP with Rbp47b Plays a Role in Stress Granule Formation"

**Selected References for 2',3'-cAMP:**

Forman, M.B.; Gillespie, D.G.; Cheng, D.; Jackson, E.K., *Dig. Dis. Sci.*, **59**, 2118 - 2125 (2014): "A Novel Adenosine Precursor 2',3'-Cyclic Adenosine Monophosphate Inhibits Formation of Post-Surgical Adhesions"