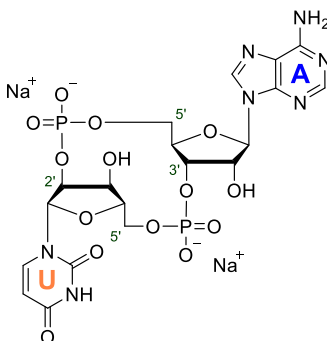


Technical Information about c[U(2',5')pA(3',5')p]

Hybrid purine-pyrimidine cyclic dinucleotide

Update: June 28, 2023 ss



Abbreviation: c[U(2',5')pA(3',5')p]

Formula	CAS No.	Molecular Weight	UV	BIOLOG Cat. No.
C ₁₉ H ₂₃ N ₇ O ₁₄ P ₂ (free acid)	[pending]	635.4 (free acid)	λ _{max} 260 nm / ε 22500 / pH 7	C 399

Name: Cyclic (uridine- (2' → 5')- monophosphate- adenosine- (3' → 5')- monophosphate), sodium salt
Syn.: c[U(2',5')pA(3',5')p] / 2'3'-cUAMP / 2',5'-3',5'-cUAMP

Description: c[U(2',5')pA(3',5')p] is a cyclic dinucleotide in which a 5'-UMP unit and a 5'-AMP are interconnected via a 2' → 5' and a 3' → 5' phosphodiester bond to form a cyclic structure.

Properties: c[U(2',5')pA(3',5')p] is a hybrid purine-pyrimidine cyclic dinucleotide that was identified as a natural nucleotide second messenger in the oyster species *Crassostrea gigas* (*C. gigas*, Pacific oyster) and *Crassostrea virginica* (*C. virginica*, Eastern oyster). In *C. virginica*, c[U(2',5')pA(3',5')p] induced a gene expression pattern strongly associated with innate immunity, including upregulated expression of genes encoding transcription factors (NF-κB, IRFs, and STATs), immune receptors (NLRs, RLRs, cGLRs, and STING), and proteins with homology to human interleukins and inhibitor of apoptosis (IAP) factors.

Specification: Crystallized or lyophilized sodium salt. 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 95% (HPLC / UV / 260 nm). The product is not sterile and has not been tested for endotoxins.

Solubility: c[U(2',5')pA(3',5')p] is soluble in water and aqueous buffers (≥ 6.8 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: c[U(2',5')pA(3',5')p] 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: Please keep in mind, that the *in vivo* properties of this compound are not sufficiently characterized up to now. Avoid contact with eyes and skin 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 Reference for c[U(2',5')pA(3',5')p]:

Li, Y.; Slavik, K.M.; Morehouse, B.R.; de Oliveira Mann, C.C.; Mears, K.; Liu, J.; Kashin, D.; Schwede, F.; Kranzusch, P.J., cGLRs are a Diverse Family of Pattern Recognition Receptors in Animal Innate Immunity, *Cell* (2023), <https://doi.org/10.1016/j.cell.2023.05.038>