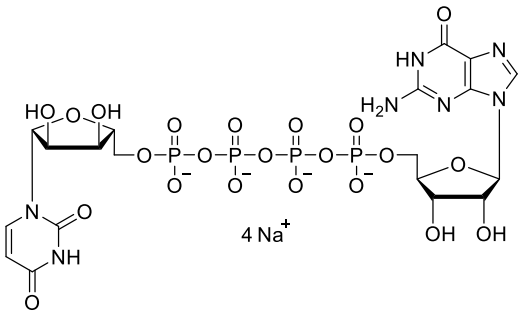
Technical Information about
P^1-(5'-Guanosyl)-P^4-(5'-uridyl)-tetraphosphate

Update: April 16, 2019 HJ



Abbreviation: **Gp_4U / Up_4G**

Formula	CAS No.	Molecular Weight	UV	BIOLOG Cat.No.
$C_{19}H_{27}N_7O_{22}P_4$ (free acid)	[79695-25-3]	829.4 (free acid)	λ_{max} 255 nm / ε 19300 / pH 7	G 027

Name: P^1- (5'- Guanosyl)- P^4- (5'- uridyl)- tetraphosphate

Description: In Gp_4U a guanosine moiety and an uridine moiety are linked via their 5' positions by four phosphate groups..

Properties: Gp_4U is a dinucleoside polyphosphate containing both, a purine nucleobase as well as a pyrimidine nucleobase moiety.

Specification: Lyophilized or crystallized sodium salt. The free acid or other salt forms are available upon request. Equal concentrations of Gp_4U 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 95% (HPLC / UV / 255 nm). The product is not sterile and has not been tested for endotoxins.

Solubility: Gp_4U has good solubility in water and aqueous buffers (≥ 10 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: Gp_4U 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 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 Gp_4U:

Plateau, P.; Fromant, M.; Schmitter, J.-M.; Blanquet, S., *J. Bacteriol.*, **172**, 6892 - 6899 (1990): "Catabolism of Bis(5'-Nucleosidyl) Tetraphosphates in Saccharomyces Cerevisiae"

Coste, H.; Brevet, A.; Plateau, P.; Blanquet, S., *J. Biol. Chem.*, **262**, 12096 - 12103 (1987): "Non-Adenylylated Bis(5'-Nucleosidyl) Tetraphosphates Occur in Saccharomyces Cerevisiae and in Escherichia Coli and Accumulate upon Temperature Shift or Exposure to Cadmium"

BIOLOG Life Science Institute, Bremen, Germany Phone: 49 (0) 421 591355 Fax: 49 (0) 421 5979713 e-mail: service@biolog.de