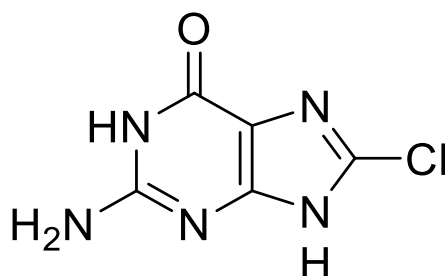


## Technical Information about 8- Chloroguanine

Potential biomarker for analysis of chlorine-stressed DNA/RNA

Update: September 10, 2018 HU



**Abbreviation:** 8-Cl-Gua

Formula	CAS No.	Molecular Weight	UV	BIOLOG Cat. No.
C <sub>5</sub> H <sub>4</sub> ClN <sub>5</sub> O	[22052-03-5]	185.6	$\lambda_{\max}$ 254 nm / $\epsilon$ 15000 / pH 7	C 027

**Name:** 8- Chloroguanine

**Description:** 8-Cl-Gua is an analogue of guanine where the hydrogen in position 8 of the heterocyclic nucleobase is replaced by a chlorine atom.

**Properties:** 8-Cl-Gua is of interest as reference material for research on chlorine-stressed DNA/RNA. For other chlorinated structures related, please inquire.

**Specification:** Crystallized or lyophilized solid. 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  $\lambda_{\max}$ .

**Purity:** Typical analysis is better than 95% (HPLC / UV / 254 nm). The product is not sterile and has not been tested for endotoxins.

**Solubility:** 8-Cl-Gua has limited solubility in cold water. However, if warmed up to 50°C better solubility can be achieved. 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-Cl-Gua 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:** Since guanine has multiple tasks in every organism, it is very likely that lipophilic analogues could 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!**

### Selected References for 8- Chloroguanine:

Badouard, C.; Masuda, M.; Nishino, H.; Cadet, J.; Favier, A.; Ravanat, J.-L., *J. Chromatogr.*, **827**, 26 - 31 (2005): "Detection of Chlorinated DNA and RNA Nucleosides by HPLC Coupled to Tandem Mass Spectrometry as Potential Biomarkers of Inflammation"