

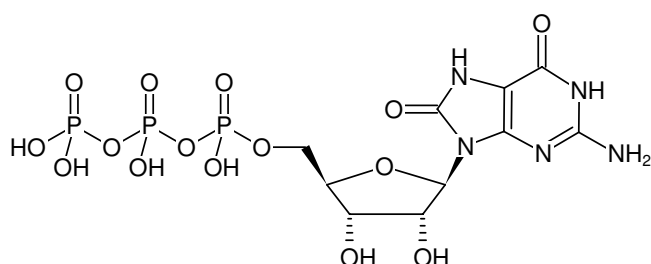
**8-Oxo-GTP**

8-Hydroxy-GTP

8-Oxo-guanosine-5'-triphosphate, Sodium salt

8-Hydroxy-guanosine-5'-triphosphate, Sodium salt

Cat. No.	Amount
NU-1116S	50 µl (10 mM)
NU-1116L	5 x 50 µl (10 mM)



Structural formula of 8-Oxo-GTP

**For general laboratory use.****Shipping:** shipped on gel packs**Storage Conditions:** store at -20 °C

Short term exposure (up to 1 week cumulative) to ambient temperature possible.

**Shelf Life:** 12 months after date of delivery**Molecular Formula:** C<sub>10</sub>H<sub>16</sub>N<sub>5</sub>O<sub>15</sub>P<sub>3</sub> (free acid)**Molecular Weight:** 539.18 g/mol (free acid)**Exact Mass:** 538.99 g/mol (free acid)**CAS#:** 21238-36-8**Purity:** ≥ 95 % (HPLC)**Form:** solution in water**Color:** colorless to slightly yellow**Concentration:** 10 mM - 11 mM**pH:** 7.5 ±0.5**Spectroscopic Properties:** λ<sub>max</sub> 245 nm, ε 12.3 L mmol<sup>-1</sup> cm<sup>-1</sup> (Tris-HCl pH 7.5)**Applications:**Hydrolysis by arabidopsis Nudix hydrolase<sup>[1]</sup>X-ray analysis of complex with GTP-cyclohydrolase I (GTPCH 1)<sup>[2]</sup>**Specific Ligands:**Binding to cancer-related PRUNE2<sup>[3]</sup>**Selected References:**

[1] Yoshimura *et al.* (2007) AtNUDX1, an 8-oxo-7,8-dihydro-2'-deoxyguanosine 5'-triphosphate pyrophosphohydrolase, is responsible for eliminating oxidized nucleotides in Arabidopsis. *Plant and Cell Physiology* **48**:1438.

[2] Tanaka *et al.* (2005) Novel reaction mechanism of GTP cyclohydrolase I. High-resolution X-ray crystallography of Thermus thermophilus HB8 enzyme complexed with a transition state analogue, the 8-oxoguanine derivative. *J. Biochem. (Tokyo)* **138** (3):263.

[3] Iwama *et al.* (2011) Cancer related PRUNE 2 protein is associated with nucleotides and is highly expressed in mature nerve tissues. *J. Molecular Neuroscience* **44**:103.

Ramírez (2004) Gene of *Bacillus subtilis* Encodes a Functional Antitumor 8-Oxo- (dGTP/GTP)ase and Is under Dual Control of Sigma A and Sigma F RNA Polymerases. *Journal of bacteriology* **186** (4):1050.

Nakabeppu (2001) Molecular genetics and structural biology of human MutT homolog, MTH1. *Mutat Res.* **477** (1-2):59.

Kobayashi *et al.* (1998) Potential of Escherichia coli GTP cyclohydrolase II for hydrolyzing 8-oxo-dGTP, a mutagenic substrate for DNA synthesis. *J. Biol. Chem.* **273** (41):26394.

Kuryavyi *et al.* (1989) Kinetics of inhibition of escherichia-coli RNA polymerase-catalyzed synthesis of the dinucleotide pppApU by 8-oxo-GTP and 8-BrgTP on the A1 promoter of Bacteriophage-t7 delta-d111 DNA using a limited set of substrates. *Mol. Biol.* **23** (3):648.