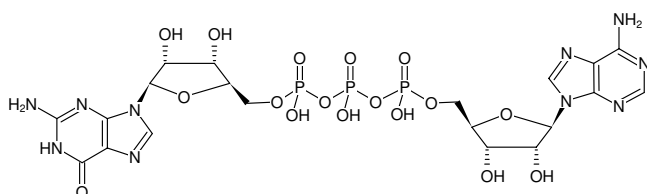




### AP<sub>3</sub>G (A cap) - Solid

(ApppG), GP3A, GpppA, G(5')ppp(5')A  
 P1-(5'-Adenosyl) P3-(5'-guanosyl) triphosphate, Sodium salt

Cat. No.	Amount
NU-941-1	1 mg
NU-941-5	5 mg



Structural formula of AP<sub>3</sub>G (A cap) - Solid

#### 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>20</sub>H<sub>27</sub>N<sub>10</sub>O<sub>17</sub>P<sub>3</sub> (free acid)

**Molecular Weight:** 772.41 g/mol (free acid)

**Exact Mass:** 772.08 g/mol (free acid)

**Purity:** ≥ 95 % (HPLC)

**Form:** solid

**Color:** white to off-white

**Spectroscopic Properties:** λ 259 nm, ε 27.0 L mmol<sup>-1</sup> cm<sup>-1</sup> (Tris-HCl pH 7.5)

#### Applications:

Synthesis of mRNA with a non-functional cap analog (ApppG) to estimate the level of cap-independent translation.<sup>[1]</sup>

Investigation of stress related (Near UV and oxidation) product formation in bacteria<sup>[2-4]</sup>

#### Selected References:

[1] Nowakowska *et al.* (2014) Cap analogs containing 6-thioguanosine-reagents for the synthesis of mRNAs selectively photo-crosslinkable with cap-binding biomolecules. *Org. Biomol. Chem.* **12** (27):4841.

[2] Kramer *et al.* (1988) Near-UV stress in *Salmonella typhimurium*: 4-thiouridine in tRNA, ppGpp, and ApppGpp as components of an adaptive response. *J. Bacteriol.* **170** (5):2344.

[3] Bochner *et al.* (1984) AppppA and related adenylylated nucleotides are synthesized as a consequence of oxidation stress. *Cell* **37** (1):225.

[4] VanBogelen *et al.* (1987) Differential induction of heat shock, SOS, and oxidation stress regulons and accumulation of nucleotides in *Escherichia coli*. *J. Bacteriol.* **169** (1):26.