



Catalog # 10-2686

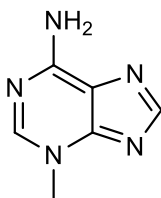
3-Methyladenine

5142-23-4

3-MA

3-Methyl-3H-purin-6-amine

Lot # X106411



Inhibits autophagy by blocking autophagosome formation via inhibition of type III phosphatidylinositol 3-kinases (PI-3K)^{1,2}. Protects 1321N1 astrocytoma cells against pyocyanin and hydroxyphenazine-induced toxicity³. Enhances celastrol-induced apoptosis in human pancreatic cancer cells⁴.

- 1) Seglen and Gordon *et al.* (1982), *3-Methyladenine: specific inhibitor of autophagic/lysosomal protein degradation in isolated rat hepatocytes*; Proc. Natl. Acad. Sci. USA, **79** 1889
- 2) Blommaart *et al.* (1997), *The phosphatidylinositol 3-kinase inhibitors wortmannin and LY294002 inhibit autophagy in isolated rat hepatocytes*; Eur. J. Biochem., **243** 240
- 3) McFarland *et al.* (2012), *Inhibition of autophagy by 3-methyladenine protects 1321N1 astrocytoma cells against pyocyanin- and 1-hydroxyphenazine-induced toxicity*; Arch. Toxicol., **86** 275
- 4) Zhao *et al.* (2014), *Inhibition of autophagy strengthens celastrol-induced apoptosis in human pancreatic cancer in vitro and in vivo models*; Curr. Mol. Med., **14** 555

PHYSICAL DATA

Molecular Weight:	149.15
Molecular Formula:	C ₆ H ₇ N ₅
Purity:	98% by TLC
	NMR: (Conforms)
Solubility:	DMSO (up to 3 mg/ml), DMF (up to 10 mg/ml with warming)
Physical Description:	White solid
Storage and Stability:	Store as supplied desiccated at -20°C for up to 2 years from the date of purchase. Solutions in DMSO or DMF may be stored at -20°C for up to 3 months.

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