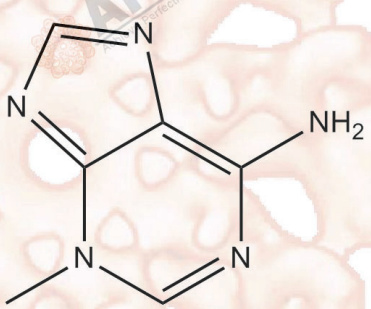
Product Data Sheet

3-Methyladenine

Cat. No.:	A8353
CAS No.:	5142-23-4
Formula:	C6H7N5
M.Wt:	149.15
Synonyms:	3-MA
Target:	Ubiquitination/ Proteasome
Pathway:	Autophagy
Storage:	Store at -20°C



Solvent & Solubility

In Vitro

⩾5 mg/mL in H2O; ⩾7.45 mg/mL in DMSO; ⩾8.97 mg/mL in EtOH

Preparing Stock Solutions

Mass / Solvent / Concentration	1mg	5mg	10mg
1 mM	6.7047 mL	33.5233 mL	67.0466 mL
5 mM	1.3409 mL	6.7047 mL	13.4093 mL
10 mM	0.6705 mL	3.3523 mL	6.7047 mL

Please refer to the solubility information to select the appropriate solvent.

Biological Activity

Shortsummary	Class III PI3K inhibitor
IC_{50} & Target	25 μM (Vps34), 60 μM (PI3Kγ)

In Vitro

Cell Viability Assay

Cell Line:	HT1080 cells
Preparation method:	The solubility of this compound in DMSO is >10 mM. General tips for obtaining a higher concentration: Please warm the tube at 37 °C for 10 minutes and/or shake it in the ultrasonic bath for a while. Stock solution can be stored below -20 °C for several months.
Reacting conditions:	5 or 10 mM; 10 hrs

	Applications:	3-Methyladenine (3-MA) (5 ~ 10 mM) strongly inhibited HT1080 cell migration. In addition, 10 mM 3-MA showed a stronger effect on the suppression of HT1080 cell migration than both 100 nM WMN and 25 μM LY294002.
In Vivo	**Animal experiment**	
	Applications:	

Product Citations

1. Tang RH, Qi RQ, et al. "Interleukin-4 affects microglial autophagic flux." Neural Regen Res. 2019 Sep;14(9):1594-1602.PMID:31089059
2. Sarah Needs. "The Biochemical Basis of Congenital Disorders of Glycosylation." The Open University. 2019.
3. Gierisch ME, Pfistner F, et al. "Proteasomal Degradation of the EWS-FLI1 Fusion Protein Is Regulated by a Single Lysine Residue." J Biol Chem. 2016 Dec 23;291(52):26922-26933.PMID:27875302
4. Xue H, Yuan G, Guo X, et al. "A Novel Tumor-promoting Mechanism of IL6 and the Therapeutic Efficacy of Tocilizumab: Hypoxia-induced IL6 Is a Potent Autophagy Initiator in Glioblastoma via the p-STAT3-MIR155-3p-CREBRF Pathway[J]." Autophagy, 10 May 2016.

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References

[1]. Ito S, Koshikawa N, Mochizuki S, et al. 3-Methyladenine suppresses cell migration and invasion of HT1080 fibrosarcoma cells through inhibiting phosphoinositide 3-kinases independently of autophagy inhibition. International journal of oncology, 2007, 31(2): 261-268.

Caution

FOR RESEARCH PURPOSES ONLY.

NOT FOR HUMAN, VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

Specific storage and handling information for each product is indicated on the product datasheet. Most APExBIO products are stable under the recommended conditions. Products are sometimes shipped at a temperature that differs from the recommended storage temperature. Shortterm storage of many products are stable in the short-term at temperatures that differ from that required for long-term storage. We ensure that the product is shipped under conditions that will maintain the quality of the reagents. Upon receipt of the product, follow the storage recommendations on the product data sheet.

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