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Technical Data Sheet

3-Methyladenine

Catalog Number :5142342

RUO: For Research Use Only. Not for use in diagnostic procedures.

Product Information

Synonyms: 3-MA, N(3)-methyladenine

Chemical Name: 3-methylpurin-6-amine

Molecular Formula: $C_6H_7N_5$

Molecular Weight: 149.2

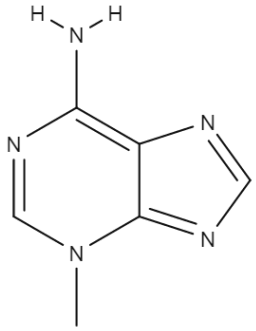
CAS Number: 5142-23-4

Purity: ≥98%

Applications: FA

Formulation: Crystalline solid

Storage: Product should be kept at -20°C.



Description

3-Methyladenine is a phosphatidylinositol 3-kinase (PI3k) inhibitor, blocking class I, class II, and class III PI3ks. This small molecule is reported to inhibit autophagy and apoptosis. The ability of 3-methyladenine to suppress the formation of electron microscopically visible autophagosomes suggests that it may be regarded as a specific inhibitor of autophagy.

Preparation & Storage

Soluble in organic solvents such as ethanol or DMSO. Soluble up to 30 mM in ethanol and 9 mM in DMSO.

References

1.Seglen, P. O., Gordon, P. B. (1982). 3-Methyladenine: specific inhibitor of autophagic/lysosomal protein degradation in isolated rat hepatocytes.Proceedings of the National Academy of Sciences,;79(6), 1889-1892.

2. Wu, Y. T., Tan, H. L., Shui, G., Bauvy, C., Huang, Q., Wenk, M. R., ... Shen, H. M. (2010). Dual role of 3-methyladenine in modulation of autophagy via different temporal patterns of inhibition on class I and III phosphoinositide 3-kinase.;Journal of Biological Chemistry,;285(14), 10850-10861.

3. CARO, L. H. P., PLOMP, P. J., WOLVETANG, E. J., KERKHOF, C., MEIJER, A. J. (1988). 3-Methyladenine, an inhibitor of autophagy, has multiple effects on metabolism.;European Journal of Biochemistry,;175(2), 325-329.

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