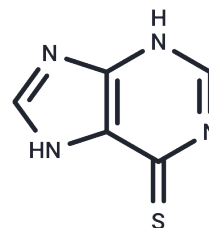


## 6-Mercaptopurine

### Chemical Properties

|                   |                                                          |
|-------------------|----------------------------------------------------------|
| CAS No. :         | 50-44-2                                                  |
| Formula:          | C <sub>5</sub> H <sub>4</sub> N <sub>4</sub> S           |
| Molecular Weight: | 152.18                                                   |
| Appearance:       | no data available                                        |
| Storage:          | Powder: -20°C for 3 years   In solvent: -80°C for 1 year |



### Biological Description

|               |                                                                                                                                                                                                                                                                                                                                       |
|---------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Description   | 6-Mercaptopurine (6-MP) is an antimetabolite antineoplastic agent with immunosuppressant properties. It interferes with nucleic acid synthesis by inhibiting purine metabolism and is used, usually in combination with other drugs, in the treatment of or in remission maintenance programs for leukemia.                           |
| Targets(IC50) | Nucleoside Antimetabolite/Analog,Others,Dehydrogenase,Endogenous Metabolite,Autophagy                                                                                                                                                                                                                                                 |
| In vivo       | Phosphoribosyl pyrophosphate amidotransferase acts as the rate-limiting enzyme in purine biosynthesis, affecting the synthesis and function of RNA and DNA. Mercaptopurine inhibits this enzyme, thereby hindering purine nucleoside and its metabolism, which interferes with nucleotide interconversion and glycoprotein synthesis. |

### Solubility Information

|            |                                                                                                                                                                                                                                                      |
|------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Solubility | DMSO: 7.5 mg/mL (49.28 mM),Sonication is recommended.<br/>Ethanol: < 1 mg/mL (insoluble or slightly soluble),<br/>H <sub>2</sub> O: < 1 mg/mL (insoluble or slightly soluble),<br/>&lt; 1 mg/ml refers to the product slightly soluble or insoluble) |
|------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

### Preparing Stock Solutions

|       | 1mg       | 5mg        | 10mg       |
|-------|-----------|------------|------------|
| 1 mM  | 6.5712 mL | 32.8558 mL | 65.7117 mL |
| 5 mM  | 1.3142 mL | 6.5712 mL  | 13.1423 mL |
| 10 mM | 0.6571 mL | 3.2856 mL  | 6.5712 mL  |
| 50 mM | 0.1314 mL | 0.6571 mL  | 1.3142 mL  |

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Reference

Dubinsky MC, et al. Clin Gastroenterol Hepatol. 2004 Sep;2(9):731-43.

Fu Y H, Xu Z X, Jiang N, et al. High-throughput screening of active compounds against human respiratory syncytial

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