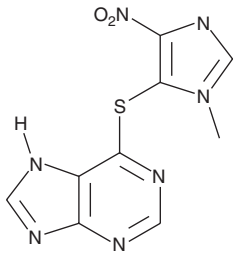
PRODUCT INFORMATION

Azathioprine

Item No. 13987

CAS Registry No.:	446-86-6
Formal Name:	6-[(1-methyl-4-nitro-1H-imidazol-5-yl) thio]-9H-purine
Synonyms:	Azamune, Azoran, BW 57-322, Imuran, NSC 39084
MF:	$C_9H_7N_7O_2S$
FW:	277.3
Purity:	≥95%
UV/Vis.:	λ_{max}: 207, 276 nm
Supplied as:	A crystalline solid
Storage:	-20°C
Stability:	≥4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

Azathioprine is supplied as a crystalline solid. A stock solution may be made by dissolving the azathioprine in the solvent of choice. Azathioprine is soluble in organic solvents such as DMSO and dimethyl formamide, which should be purged with an inert gas. The solubility of azathioprine in these solvents is approximately 12.5 and 5 mg/ml, respectively.

Azathioprine is sparingly soluble in aqueous solutions. To enhance aqueous solubility, dilute the organic solvent solution into aqueous buffers or isotonic saline. If performing biological experiments, ensure the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. We do not recommend storing the aqueous solution for more than one day.

Description

Azathioprine is a purine analog with immunosuppressive effects.[1] It serves as a prodrug for 6-mercaptopurine, which alters purine processing and DNA synthesis, interfering with the proliferation of lymphocytes and other myeloid cells.[1,2] Its immunomodulating actions are used to benefit inflammatory bowel disease, as well as a wide range of additional diseases with immunological or autoimmunological components, including rheumatoid arthritis and lupus nephritis.[1-3]

References

1. Nielsen, O.H., Vainer, B., and Rask-Madsen, J. Review article: The treatment of inflammatory bowel disease with 6-mercaptopurine or azathioprine. *Aliment. Pharmacol. Ther.* **15**, 1699-1708 (2001).
2. Clunie, G.P.R. and Lennard, L. Relevance of thiopurine methyltransferase status in rheumatology patients receiving azathioprine. *Rheumatology* **43(1)**, 13-18 (2004).
3. Appel, G.B. New and future therapies for lupus nephritis. *Cleve. Clin. J. Med.* **79(2)**, 134-140 (2012).

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