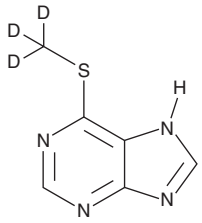
PRODUCT INFORMATION

6-Methylmercaptopurine-d_3

Item No. 36321

CAS Registry No.:	33312-93-5
Formal Name:	6-(methyl-d_3-thio)-9H-purine
Synonyms:	6-MMP-d_3, 6-(Methylthio)purine-d_3
MF:	$C_6H_3D_3N_4S$
FW:	169.2
Chemical Purity:	≥98% (6-Methylmercaptopurine)
Deuterium Incorporation:	≥99% deuterated forms (d_1-d_3); ≤1% d_0
Supplied as:	A 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

6-Methylmercaptopurine-d_3 (6-MMP-d_3) is intended for use as an internal standard for the quantification of 6-MMP (Item No. 34356) by GC- or LC-MS. The accuracy of the sample weight in this vial is between 5% over and 2% under the amount shown on the vial. If better precision is required, the deuterated standard should be quantitated against a more precisely weighed unlabeled standard by constructing a standard curve of peak intensity ratios (deuterated *versus* unlabeled).

6-MMP-d_3 is supplied as a solid. A stock solution may be made by dissolving the 6-MMP-d_3 in the solvent of choice, which should be purged with an inert gas. 6-MMP-d_3 is soluble in organic solvents such as DMSO and dimethyl formamide. The solubility of 6-MMP-d_3 in these solvents is approximately 30 and 15 mg/ml, respectively.

Description

6-MMP is a metabolite of the purine synthesis and interconversion inhibitor 6-mercaptopurine (6-MP; Item No. 23675).[1] It is formed from 6-MP *via* methylation by thiopurine S-methyltransferase. Levels of 6-MMP are increased in patients with altered thiopurine metabolism and associated with therapeutic resistance to 6-MP.[2]

References

1. Rieder, M.J., and Carleton, B. Pharmacogenomics and adverse drug reactions in children. *Front. Genet.* **5**, 78 (2014).
2. van Egmond, R., Chin, P., Zhang, M., *et al.* High TPMT enzyme activity does not explain drug resistance due to preferential 6-methylmercaptopurine production in patients on thiopurine treatment. *Aliment. Pharmacol. Ther.* **35(10)**, 1181-1189 (2012).

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