

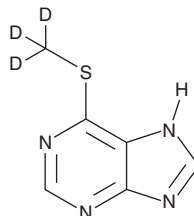
# PRODUCT INFORMATION



## 6-Methylmercaptapurine-d<sub>3</sub>

Item No. 36321

**CAS Registry No.:** 33312-93-5  
**Formal Name:** 6-(methyl-d<sub>3</sub>-thio)-9H-purine  
**Synonyms:** 6-MMP-d<sub>3</sub>, 6-(Methylthio)purine-d<sub>3</sub>  
**MF:** C<sub>6</sub>H<sub>3</sub>D<sub>3</sub>N<sub>4</sub>S  
**FW:** 169.2  
**Chemical Purity:** ≥98% (6-Methylmercaptapurine)  
**Deuterium**  
**Incorporation:** ≥99% deuterated forms (d<sub>1</sub>-d<sub>3</sub>); ≤1% d<sub>0</sub>  
**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-Methylmercaptapurine-d<sub>3</sub> (6-MMP-d<sub>3</sub>) 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<sub>3</sub> is supplied as a solid. A stock solution may be made by dissolving the 6-MMP-d<sub>3</sub> in the solvent of choice, which should be purged with an inert gas. 6-MMP-d<sub>3</sub> is soluble in organic solvents such as DMSO and dimethyl formamide. The solubility of 6-MMP-d<sub>3</sub> 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).<sup>1</sup> 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.<sup>2</sup>

### 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-methylmercaptapurine production in patients on thiopurine treatment. *Aliment. Pharmacol. Ther.* 35(10), 1181-1189 (2012).

#### WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

#### SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the [complete](#) Safety Data Sheet, which has been sent via email to your institution.

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