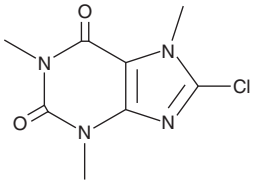
PRODUCT INFORMATION

8-chloro Caffeine

Item No. 35817

CAS Registry No.: 4921-49-7
Formal Name: 8-chloro-3,7-dihydro-1,3,7-trimethyl-1H-purine-2,6-dione
Synonym: NSC 6277
MF: $C_8H_9ClN_4O_2$
FW: 228.6
Purity: ≥98%
UV/Vis.: λ_{max}: 277 nm
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

8-chloro Caffeine is supplied as a solid. A stock solution may be made by dissolving the 8-chloro caffeine in the solvent of choice, which should be purged with an inert gas. 8-chloro Caffeine is soluble in chloroform.

Description

8-chloro Caffeine is a derivative of the methylxanthine alkaloid caffeine (Item No. 14118). It binds to adenosine receptors (apparent K_i = 30 µM).[1] 8-chloro Caffeine (250 µM) potentiates UV-induced chromosomal aberrations in Cl-I Chinese hamster embryonic lung cells.[2] It has also been used in the synthesis of mixed lineage kinase domain-like protein (MLKL) inhibitors with necroptosis-inhibiting activity.[3]

References

1. Bruns, R.F. Adenosine antagonism by purines, pteridines and benzopteridines in human fibroblasts. *Biochem. Pharmacol.* **30(4),** 325-333 (1981).
2. Nilsson, K. and Lehmann, A.R. The effect of methylated oxypurines on the size of newly-synthesized DNA and on the production of chromosome aberrations after UV irradiation in Chinese hamster cells. *Mutat. Res.* **30(2),** 255-266 (1975).
3. Yan, B., Liu, L., Huang, S., *et al.* Discovery of a new class of highly potent necroptosis inhibitors targeting the mixed lineage kinase domain-like protein. *Chem. Commun. (Camb.)* **53(26),** 3637-3640 (2017).

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