# PRODUCT INFORMATION

## NU 2058

*Item No. 21415*

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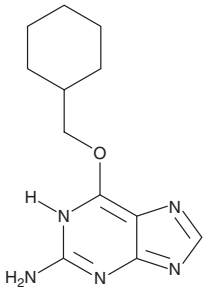
| **CAS Registry No.:** | 161058-83-9 |
| **Formal Name:** | 6-(cyclohexylmethoxy)-9H-purin-2-amine |
| **Synonym:** | $O^6$-(Cyclohexylmethyl)guanine |
| **MF:** | $C_{12}H_{17}N_5O$ |
| **FW:** | 247.3 |
| **Purity:** | ≥98% |
| **UV/Vis.:** | $\lambda_{max}$: 241, 282 nm |
| **Supplied as:** | A crystalline 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

NU 2058 is supplied as a crystalline solid. A stock solution may be made by dissolving the NU 2058 in the solvent of choice, which should be purged with an inert gas. NU 2058 is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of NU 2058 in ethanol is approximately 1 mg/ml and approximately 25 mg/ml in DMSO and DMF.

NU 2058 is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, NU 2058 should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. NU 2058 has a solubility of approximately 0.12 mg/ml in a 1:7 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

### Description

NU 2058 is an inhibitor of cyclin-dependent kinase 1 (Cdk1) and Cdk2 ($IC_{50}$s = 7.0 and 17 µM, respectively).[1,2] Increased Cdk activity is often associated with human tumors, and inhibitors of Cdks, including NU 2058, can arrest cell cycling in cancer cells *in vitro*.[2-4]

### References


1. Hardcastle, I.R., Arris, C.E., Bentley, J., *et al.* $N^2$-substituted $O^6$-cyclohexylmethylguanine derivatives: Potent inhibitors of cyclin-dependent kinases 1 and 2. *J. Med. Chem.* **47**, 3710-3722 (2004).
2. Sayle, K.L., Bentley, J., Boyle, F.T., *et al.* Structure-based design of 2-arylamino-4-cyclohexylmethyl-5-nitroso-6-aminopyrimidine inhibitors of cyclin-dependent kinases 1 and 2. *Bioorg. Med. Chem. Lett.* **13(18)**, 3079-3082 (2003).
3. Johnson, N., Bentley, J., Wang, L.-Z., *et al.* Pre-clinical evaluation of cyclin-dependent kinase 2 and 1 inhibition in anti-estrogen-sensitive and resistant breast cancer cells. *Br. J. Cancer* **102(2)**, 342-350 (2010).
4. Rigas, A.C., Robson, C.N., and Curtin, N.J. Therapeutic potential of CDK inhibitor NU2058 in androgen-independent prostate cancer. *Oncogene* **26(55)**, 7611-7619 (2007).





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