# PRODUCT INFORMATION

## CPI-455

*Item No. 22127*

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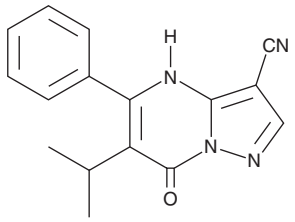
| **CAS Registry No.:** | 1628208-23-0 |
| **Formal Name:** | 4,7-dihydro-6-(1-methylethyl)-7-oxo-5-phenyl-pyrazolo[1,5-a] pyrimidine-3-carbonitrile |
| **MF:** | $C_{16}H_{14}N_4O$ |
| **FW:** | 278.3 |
| **Purity:** | ≥98% |
| **UV/Vis.:** | $\lambda_{max}$: 239, 280, 322 nm |
| **Supplied as:** | 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

CPI-455 is supplied as a crystalline solid. A stock solution may be made by dissolving the CPI-455 in the solvent of choice. CPI-455 is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF), which should be purged with an inert gas. The solubility of CPI-455 in these solvents is approximately 5 mg/ml in ethanol and approximately 30 mg/ml in DMSO and DMF.

CPI-455 is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, CPI-455 should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. CPI-455 has a solubility of approximately 0.05 mg/ml in a 1:20 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

### Description

CPI-455 is an inhibitor of the lysine demethylase 5 family ($KDM5_{A-D}$).[1] CPI-455 binds to the demethylase active site and selectively inhibits $KDM5_{A-D}$ ($IC_{50}$s = 2-10 nM) over KDM2-4, 6, and 7 family members ($IC_{50}$s = 1 to >25 µM). It increases histone H3K4me2/3 methylation *in vitro* and decreases the number of drug-tolerant cells in PC9 non-small cell lung, M14 melanoma, and SKBR3 breast cancer cell populations. CPI-455 also reduces growth of glioblastoma cells resistant to temozolomide (TMZ; Item No. 14163) in a dose-dependent manner.[2]

### References


1. Vinogradova, M., Gehling, V.S., Gustafson, A., *et al.* An inhibitor of KDM5 demethylases reduces survival of drug-tolerant cancer cells. *Nat. Chem. Biol.* **12(7)**, 531-538 (2016).
2. Banelli, B., Daga, A., Forlani, A., *et al.* Small molecules targeting histone demethylase genes (KDMs) inhibit growth of temozolomide-resistant glioblastoma cells. *Oncotarget* **8(21)**, 34896-34910 (2017).





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