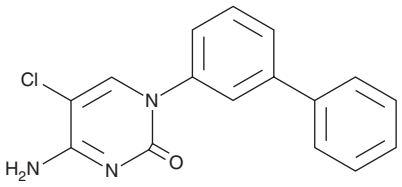
# PRODUCT INFORMATION

## Bobcat 339

*Item No. 31453*

**CAS Registry No.:** 2280037-51-4
**Formal Name:** 4-amino-1-[1,1′-biphenyl]-3-yl-5-chloro-2(1H)-pyrimidinone
**Synonym:** BC339
**MF:** $C_{16}H_{12}ClN_3O$
**FW:** 297.7
**Purity:** ≥98%
**UV/Vis.:** $\lambda_{max}$: 250 nm
**Supplied as:** A crystalline solid
**Storage:** -20°C
**Stability:** ≥4 years
**Elemental Analysis:** ***batch specific*** ppm




*Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.*

### Laboratory Procedures

Bobcat 339 is supplied as a crystalline solid. A stock solution may be made by dissolving the bobcat 339 in the solvent of choice, which should be purged with an inert gas. Bobcat 339 is soluble in organic solvents such as DMSO and dimethyl formamide. The solubility of bobcat 339 in these solvents is approximately 1 mg/ml.

Bobcat 339 is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, bobcat 339 should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. Bobcat 339 has a solubility of approximately 0.11 mg/ml in a 1:8 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

### Description

Bobcat 339 is a cytosine derivative that was originally found to be an inhibitor of ten-eleven translocation methylcytosine dioxygenase 1 (TET1) and TET2 ($IC_{50}$s = 33 and 73 µM, respectively, in cell-free assays).[1] However, it was found that the TET inhibitory activity was due to residual copper in the Bobcat 339 preparation used for the experiments.[2] Copper-containing Bobcat 339 (10 µM) also reduces DNA 5-hydroxymethylcytosine (5-hmC) levels in HT22 hippocampal neurons, but copper-free preparations of Bobcat 339 (50 µM) do not reduce DNA 5-hmC levels in Hep3B cells.[1,2]

### References


1. Chua, G.N.L., Wassarman, K.L., Sun, H., *et al.* Cytosine-based TET enzyme inhibitors. *ACS Med. Chem. Lett.* **10(2)**, 180-185 (2019).
2. Weirath, N.A., Hurben, A.K., Chao, C., *et al.* Small molecule inhibitors of TET dioxygenases: Bobcat339 activity is mediated by contaminating copper(II). *ACS Med. Chem. Lett.* **13(5)**, 792-798 (2022).





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