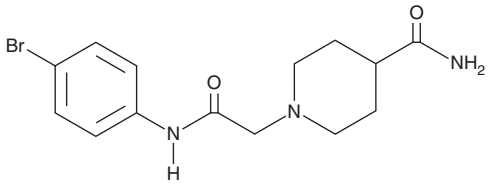
PRODUCT INFORMATION

BCI-121

Item No. 33854

CAS Registry No.:	432529-82-3
Formal Name:	4-(aminocarbonyl)-N-(4-bromophenyl)-1-piperidineacetamide
MF:	$C_{14}H_{18}BrN_3O_2$
FW:	340.2
Purity:	≥98%
UV/Vis.:	λ_{max}: 253 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

BCI-121 is supplied as a solid. A stock solution may be made by dissolving the BCI-121 in the solvent of choice, which should be purged with an inert gas. BCI-121 is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of BCI-121 in ethanol is approximately 10 mg/ml and approximately 30 mg/ml in DMSO and DMF.

BCI-121 is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, BCI-121 should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. BCI-121 has a solubility of approximately 0.33 mg/ml in a 1:2 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

BCI-121 is an inhibitor of SET and MYND domain-containing protein 3 (SMYD3).[1] It inhibits histone H3 lysine 4 (H3K4) di- and trimethylation in HT-29 cell lysates when used at a concentration of 100 µM. BCI-121 (100 µM) inhibits proliferation in a panel of colorectal, lung, pancreatic, prostate, and ovarian cancer cell lines in an SMYD3 expression-dependent manner. It induces cell cycle arrest at the S phase and decreases global H5K4 methylation and H3K4 dimethylation in HT-29 cells in a concentration-dependent manner. Intratumoral injection of BCI-121 (20 µM) reduces tumor volume in an MHCC97H hepatocellular carcinoma (HCC) mouse xenograft model.[2]

References

1. Peserico, A., Germani, A., Sanese, P., *et al.* A SMYD3 small-molecule inhibitor impairing cancer cell growth. *J. Cell. Physiol.* **230(10)**, 2447-2460 (2015).
2. Wang, Y., Xie, B.-H., Lin, W.-H., *et al.* Amplification of SMYD3 promotes tumorigenicity and intrahepatic metastasis of hepatocellular carcinoma via upregulation of CDK2 and MMP2. *Oncogene* **38(25)**, 4948-4961 (2019).

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