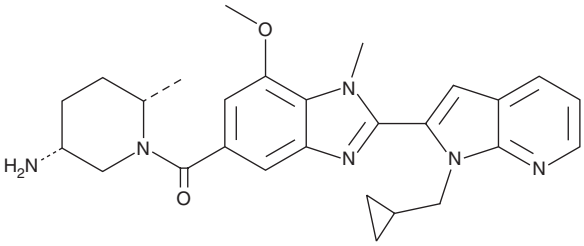
PRODUCT INFORMATION

BMS-P5

Item No. 33581

CAS Registry No.:	1550371-22-6
Formal Name:	[(2S,5R)-5-amino-2-methyl-1-piperidinyl][2-[1-(cyclopropylmethyl)-1H-pyrrolo[2,3-b]pyridin-2-yl]-7-methoxy-1-methyl-1H-methanone
MF:	$C_{27}H_{32}N_6O_2$
FW:	472.6
Purity:	≥98%
UV/Vis.:	λ_{max}: 219, 308 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

BMS-P5 is supplied as a crystalline solid. A stock solution may be made by dissolving the BMS-P5 in the solvent of choice, which should be purged with an inert gas. BMS-P5 is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide. The solubility of BMS-P5 in these solvents is approximately 30, 5, and 20 mg/ml, respectively.

BMS-P5 is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, BMS-P5 should first be dissolved in ethanol and then diluted with the aqueous buffer of choice. BMS-P5 has a solubility of approximately 0.11 mg/ml in a 1:8 solution of ethanol:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

BMS-P5 is an inhibitor of protein arginine deiminase 4 (PAD4; IC_{50} = 0.098 µM).[1] It is selective for PAD4 over PAD1, -2, and -3 (IC_{50}s = >10 µM for all). BMS-P5 (1 µM) inhibits citrullination of histone H3 and neutrophil extracellular trap (NET) formation induced by RPMI-8226- or MM.1S-conditioned medium in isolated human neutrophils. It delays disease onset and increases survival in a DP42 syngeneic mouse model of multiple myeloma when administered at a dose of 50 mg/kg.

Reference

1. Li, M., Lin, C., Deng, H., *et al.* A novel peptidylarginine deiminase 4 (PAD4) inhibitor BMS-P5 blocks formation of neutrophil extracellular traps and delays progression of multiple myeloma. *Mol. Cancer Ther.* **19(7)**, 1530-1538 (2020).

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