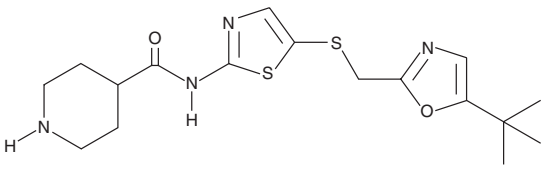
PRODUCT INFORMATION

SNS-032

Item No. 17904

CAS Registry No.:	345627-80-7
Formal Name:	N-[5-[[[5-(1,1-dimethylethyl)-2-oxazolyl]methyl]thio]-2-thiazolyl]-4-piperidinecarboxamide
Synonym:	BMS-387032
MF:	$C_{17}H_{24}N_4O_2S_2$
FW:	380.5
Purity:	≥98%
UV/Vis.:	λ_{max}: 285 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

SNS-032 is supplied as a crystalline solid. A stock solution may be made by dissolving the SNS-032 in the solvent of choice, which should be purged with an inert gas. SNS-032 is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of SNS-032 in these solvents is approximately 2.5, 2, and 10 mg/ml, respectively.

SNS-032 is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, SNS-032 should first be dissolved in DMF and then diluted with the aqueous buffer of choice. SNS-032 has a solubility of approximately 0.5 mg/ml in a 1:1 solution of DMF:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

Cyclin-dependent kinases (CDKs) are key regulators of cell cycle progression and are therefore promising targets for cancer therapy. SNS-032 is an ATP-competitive inhibitor of Cdk9, 2, and 7 with IC_{50} values of 4, 38, and 62 nM, respectively.[1] It is selective for these kinases and displays no additional activity against a panel of 190 kinases (IC_{50}s = >1,000 nM).[1] SNS-032 can block the cell cycle, inhibit transcription, and induce apoptosis in multiple myeloma RPMI-8226 cells with an IC_{90} value of 0.3 µM.[2] This compound has been shown to induce apoptosis by inhibiting the transcription of the anti-apoptotic proteins, Mcl-1 and XIAP.[3]

References

1. Misra, R.N., Xiao, H.-Y., Kim, K.S., *et al.* N-(cycloalkylamino)acyl-2-aminothiazole inhibitors of cyclin-dependent kinase 2. N-[5-[[[5-(1,1-dimethylethyl)-2-oxazolyl]methyl]thio]-2-thiazolyl]-4-piperidinecarboxamide (BMS-387032), a highly efficacious and selective antitumor agent. *J. Med. Chem.* **47(7)**, 1719-1728 (2004).
2. Conroy, A., Stockett, D.E., Walker, D., *et al.* SNS-032 is a potent and selective CDK 2, 7 and 9 inhibitor that drives target modulation in patient samples. *Cancer Chemother. Pharmacol.* **64**, 723-732 (2009).
3. Chen, R., Wierda, W.G., Chubb, S., *et al.* Mechanism of action of SNS-032, a novel cyclindependent kinase inhibitor, in chronic lymphocytic leukemia. *Blood* **113(19)**, 4637-4645 (2009).

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