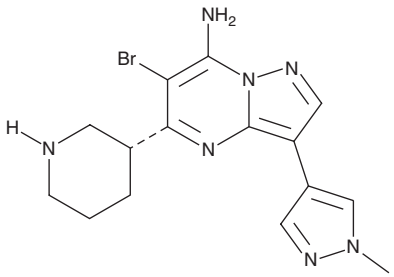
PRODUCT INFORMATION

SCH 900776

Item No. 18131

CAS Registry No.:	891494-63-6
Formal Name:	6-bromo-3-(1-methyl-1H-pyrazol-4-yl)-5-(3R)-3-piperidinyl-pyrazolo[1,5-a]pyrimidin-7-amine
Synonym:	MK-8776
MF:	$C_{15}H_{18}BrN_7$
FW:	376.3
Purity:	≥95%
UV/Vis.:	λ_{max}: 209, 241, 309, 342 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

SCH 900776 is supplied as a crystalline solid. A stock solution may be made by dissolving the SCH 900776 in the solvent of choice. SCH 900776 is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide, which should be purged with an inert gas. The solubility of SCH 900776 in these solvents is approximately 3, 20, and 5 mg/ml, respectively.

Further dilutions of the stock solution into aqueous buffers or isotonic saline should be made prior to performing biological experiments. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. Organic solvent-free aqueous solutions of SCH 900776 can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of SCH 900776 in PBS, pH 7.2, is approximately 10 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

Checkpoint kinase 1 (Chk1) regulates S and G_2-M phase cell cycle checkpoints in response to DNA damage. SCH 900776 is a functionally selective inhibitor of Chk1 (K_d = 2 nM; IC_{50} = 3 nM).[1] In comparison, 18-fold and 500-fold higher concentrations of this compound are required to inhibit CDK2 and Chk2.[1] At 5-50 mg/kg, SCH 900776 dose-dependently interacts synergistically with DNA antimetabolite agents *in vitro* and *in vivo* to selectively induce double-strand DNA breaks and cell death in tumor cells.[1]

Reference

1. Guzi, T.J., Paruch, K., Dwyer, M.P., *et al*. Targeting the replication checkpoint using SCH 900776, a potent and functionally selective CHK1 inhibitor identified *via* high content screening. *Mol. Cancer Ther.* **10(4)**, 591-602 (2011).

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