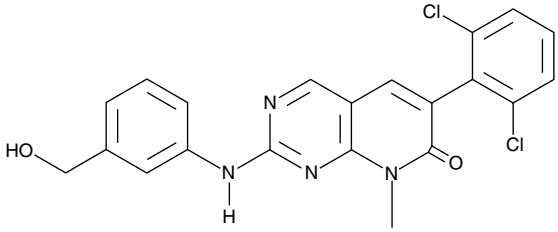
Product Information

PD 166326

Item No. 9000988

CAS Registry No.: 185039-91-2
Formal Name: 6-(2,6-dichlorophenyl)-2-[[3-(hydroxymethyl)phenyl]amino]-8-methyl-pyrido[2,3-d]pyrimidin-7(8H)-one
MF: $C_{21}H_{16}Cl_2N_4O_2$
FW: 427.3
Purity: ≥95%
Stability: ≥1 year at -20°C
Supplied as: A crystalline solid
UV/Vis.: λ_{max}: 212, 259, 307, 362 nm



Laboratory Procedures

For long term storage, we suggest that PD 166326 be stored as supplied at -20°C. It should be stable for at least one year.

PD 166326 is supplied as a crystalline solid. A stock solution may be made by dissolving the PD 166326 in the solvent of choice. PD 166326 is soluble in organic solvents such as DMSO and dimethyl formamide, which should be purged with an inert gas. The solubility of PD 166326 in these solvents is approximately 25 mg/ml.

PD 166326 is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, PD 166326 should first be dissolved in DMF and then diluted with the aqueous buffer of choice. PD 166326 has a solubility of approximately 0.2 mg/ml in a 1:4 solution of DMF:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

PD 166326 is a pyridopyrimidine-type inhibitor of receptor tyrosine kinases that inhibits c-abl (IC_{50} = 8 nM) and Bcr/Abl-dependent cell growth (IC_{50} = 0.4 nM).[1,2] In addition to targeting a select group of receptor tyrosine kinases, PD 166326 also potently inhibits c-src (IC_{50} = 6 nM).[3] Orally administered PD 166326 is well tolerated and effectively blocks Bcr/Abl kinase activity *in vivo*.[4] Moreover, PD 166326 affects a distinct set of kinases from those targeted by imatinib mesylate (STI571) and can reduce the growth of some imatinib-resistant cells both *in vitro* and *in vivo* in animal models of chronic myelogenous leukemia.[2-4]

References

1. Wisniewski, D., Lambek, C.L., Liu, C., *et al.* Characterization of potent inhibitors of the Bcr-Abl and the c-kit receptor tyrosine kinases. *Cancer Res.* **62(15)**, 4244-4255 (2002).
2. Huron, D.R., Gorre, M.E., Kraker, A.J., *et al.* A novel pyridopyrimidine inhibitor of abl kinase is a picomolar inhibitor of Bcr-abl-driven K562 cells and is effective against STI571-resistant Bcr-abl mutants. *Clin. Cancer Res.* **9(4)**, 1267-1273 (2003).
3. Wolff, N.C., Veach, D.R., Tong, W.P., *et al.* PD166326, a novel tyrosine kinase inhibitor, has greater antileukemic activity than imatinib mesylate in a murine model of chronic myeloid leukemia. *Blood* **105(10)**, 3995-4003 (2005).
4. Azam, M., Nardi, V., Shakespeare, W.C., *et al.* Activity of dual SRC-ABL inhibitors highlights the role of BCR/ABL kinase dynamics in drug resistance. *Proc. Natl. Acad. Sci. USA* **103(24)**, 9244-9249 (2006).

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