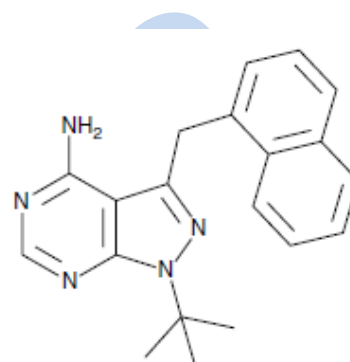


1NM-PP1

CAS# 221244-14-0

CAS Registry No.:	221244-14-0
Formal Name:	1-(1,1-dimethylethyl)-3-(1-naphthalenylmethyl)-1H-pyrazolo[3,4-d]pyrimidin-4-amine
Synonym:	PP1 Analog II
MF:	C ₂₀ H ₂₁ N ₅
FW:	331.4
Purity:	≥95%
Stability:	≥2 years at -20°C
Supplied as:	A crystalline solid



Laboratory Procedures

For long term storage, we suggest that 1-NM-PP1 be stored as supplied at -20°C. It should be stable for at least two years.

1-NM-PP1 is supplied as a crystalline solid. A stock solution may be made by dissolving the 1-NM-PP1 in an organic solvent purged with an inert gas. 1-NM-PP1 is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of 1-NM-PP1 in ethanol is approximately 2 mg/ml and approximately 20 mg/ml in DMSO and DMF.

1-NM-PP1 is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, 1-NM-PP1 should first be dissolved in DMF and then diluted with the aqueous buffer of choice. 1-NM-PP1 has a solubility of approximately 0.15 mg/ml in a 1:5 solution of DMF:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

1-NM-PP1 is a cell permeable inhibitor of kinases that have been mutated, by a single base substitution, to become 'analog sensitive' (as), as compared to the wild-type kinase. 1-NM-PP1 was first developed to optimally inhibit v-Src-as1, with an I338G substitution, preferentially over v-Src (IC₅₀ = 4.2 nM versus 28 μM, respectively).¹ The homologous mutation in other kinases generated similar analog sensitivity (e.g., IC₅₀ = 3.2 nM for c-Fyn-as1 versus 1.0 μM for c-Fyn; 5.0 nM for CDK2-as1 versus 29 μM for CDK2; 8.0 nM for CAMKII-as1 versus 24 μM for CAMKII).² This approach has been used to elucidate functions of several kinases in both mammalian and yeast systems.²⁻⁶

References

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