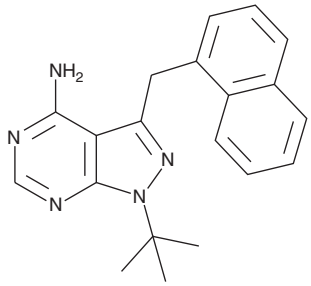
PRODUCT INFORMATION

1-NM-PP1

Item No. 13330

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%
UV/Vis.: λ_{max}: 224, 282 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

1-NM-PP1 is supplied as a crystalline solid. A stock solution may be made by dissolving the 1-NM-PP1 in the solvent of choice, which should be purged with an inert gas. 1-NM-PP1 is sparingly soluble (≥10 mg/ml) in DMSO.

Description

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 (IC_{50} = 4.2 nM *versus* 28 µM, respectively).[1] The homologous mutation in other kinases generated similar analog sensitivity (*e.g.*, IC_{50} = 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

1. Bishop, A.C., Kung, C.y., Shah, K., *et al. J. Am. Chem. Soc.* **121(4)**, 627-631 (1999).
2. Bishop, A.C., Ubersax, J.A., Petsch, D.T., *et al. Nature* **407(6802)**, 395-401 (2000).
3. Weiss, E.L., Bishop, A.C., Shokat, K.M., *et al. Nat. Cell Biol.* **2(10)**, 677-685 (2000).
4. Ira, G., Pellicioli, A., Balijja, A., *et al. Nature* **431(7011)**, 1011-1017 (2004).
5. Larochelle, S., Merrick, K.A., Terret, M.E., *et al. Mol. Cell* **25(6)**, 839-850 (2007).
6. Van den Broeke, C., Radu, M., Deruelle, M., *et al. Proc. Natl. Acad. Sci. USA* **106(21)**, 8707-8712 (2009).

WARNING
THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA
This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent *via* email to your institution.

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