Cell Guidance Systems Ltd, Babraham Research Park, Cambridge CB22 3AT, UK

Data Sheet

Research Use Only

Compound Name

PP1

Alternative Names

AGL-1872, PP 1, 1-tert-butyl-3-(4-methylphenyl)pyrazolo[3,4-d]pyrimidin-4-amine

Catalog Number

SM79

Activity

PP1 is a selective and potent Src-family tyrosine kinase inhibitor. PP1 studies have proved its ability to potently inhibit Lck and Fyn (FynT), IL-2 gene activation in T lymphocytes, and anti-CD3-induced protein tyrosine phosphorylation. Research indicates that PP1 effectively blocks LPA and EGF-enhanced tyrosine phosphorylation, MAPK activation downstream of EGFR, Rsk-1 (p90RSK) activation by H2O2, Kit and Bcr-Abl tyrosine kinases, and degrades RETMEN2A and RETMEN2B oncoproteins via proteosomal targeting. PP1 and its analog, PP2, are powerful inhibitors of TGF-β-induced cell migration and invasion *in vitro*.

Effect

It inhibits anti-CD3-induced T cell tyrosine phosphorylation, TcR-induced T cell proliferation, and IL-2 gene induction. PP1 has been demonstrated to reduce the expression of vascular endothelial growth factor (VEGF), protect the blood-brain barrier, reduce brain edema immediately after subarachnoid hemorrhage, and offer cerebral protection against stroke. It prevents metastatic spread in late-stage pancreatic ductal adenocarcinoma and non-small cell lung cancer.

Purity

>99%

CAS

172889-26-8

Formula

$C_{16}H_{19}N_5$

Molecular Weight

281.36

Solubility

DMSO

Stability

Stable at -20°C. Keep away from direct sunlight.

References

1. Hanke, JH., et al. 1996. J Biol Chem. 271(2): 695-701. PMID: 8557675
2. Carlomagno, F., et al. 2002. Cancer Res. 62(4): 1077-1082. PMID: 11861385
3. Zhang, Y., et al. 2012. Genes Dev. 26(1): 69-81. PMID: 22215812
4. Ma, T., et al. 2013. Circ Res. 112(3): 562-574. PMID: 23371904