**Product Description**

PP1 is a reversible inhibitor of the SRC family of tyrosine kinases. It inhibits LCK, FYN, HCK, and SRC with IC$_{50}$ values of 5, 6, 20, and 170 nM, respectively (Hanke et al.). It is relatively selective for SRC family kinases versus other kinases, inhibiting epidermal growth factor receptor (EGFR), janus-activated kinase 2 (JAK2) and zeta-chain-associated protein kinase 70 (ZAP70) with IC$_{50}$ values of 0.25, > 50, and > 100 µM, respectively, and c-KIT, platelet-derived growth factor receptor (PDGFR), and RET tyrosine kinase in the 75 - 100 nM range (Carlomagno et al.; Tatton et al.; Waltenberger et al.; Hanke et al.). PP1 also blocks TGF-β-mediated cellular responses by directly inhibiting type I TGF-β receptors (IC$_{50}$ = 50 nM; Ungefroren et al.; Maeda et al.).

**Molecular Name:** PP1  
**Alternative Names:** AGL 1872, EI 275  
**CAS Number:** 172889-26-8  
**Chemical Formula:** C$_{16}$H$_{19}$N$_{5}$  
**Molecular Weight:** 281.4 g/mol  
**Purity:** ≥ 98%  
**Chemical Name:** 4-Amino-5-(methylphenyl)-7-(t-butyl)pyrazolo-(3,4-d)pyrimidine  
**Structure:**

![Structure of PP1]

**Properties**

**Physical Appearance:** A white crystalline solid

**Storage:** Product stable at -20°C as supplied. Protect from prolonged exposure to light. For product expiry date, please contact techsupport@stemcell.com.

**Solubility:**
- DMSO ≤ 3 mM
- Absolute ethanol ≤ 0.5 mM

For example, to prepare a 1 mM stock solution in DMSO, resuspend 1 mg in 3.55 mL of DMSO.

Prepare stock solution fresh before use. Information regarding stability of small molecules in solution has rarely been reported, however, as a general guide we recommend storage in DMSO at -20°C. Aliquot into working volumes to avoid repeated freeze-thaw cycles. The effect of storage of stock solution on compound performance should be tested for each application.

Compound has low solubility in aqueous media. For use as a cell culture supplement, stock solution should be diluted into culture medium immediately before use. Avoid final DMSO concentration above 0.1% due to potential cell toxicity.
Published Applications

REPROGRAMMING
- Enables reprogramming of mouse embryonic fibroblasts to induced pluripotent stem cells in the absence of reprogramming factor SOX2 (Staerk et al.; Ma et al.).

CANCER RESEARCH
- Blocks TGF-β-mediated migration of primary non-small cell lung carcinoma cells and pancreatic ductal adenocarcinoma cell lines (Bartscht et al.).
- Induces apoptosis in non-small cell lung cancer cell lines (Zhang et al.).

References


Related Small Molecules

For a complete list of small molecules available from STEMCELL Technologies, please visit our website at www.stemcell.com/smallmolecules or contact us at techsupport@stemcell.com.

This product is hazardous. Please refer to the Safety Data Sheet (SDS).