

Small Molecules

CGP77675 (Hydrate)

Src family kinases inhibitor; Inhibits Src, LCK, Yes, Cdc2, EGFR, VEGFR, v-Abl, and FAK

Catalog #74132
74134

5 mg
10 mg



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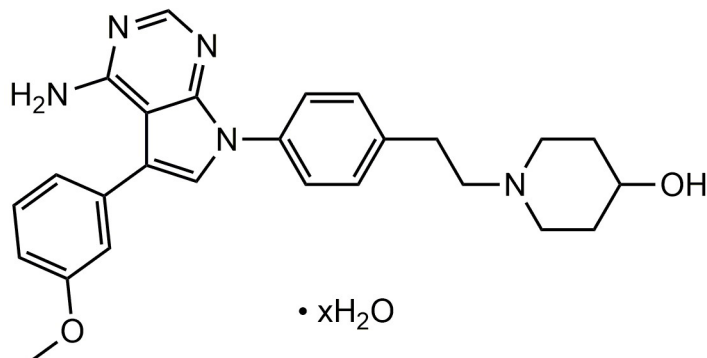
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Product Description

CGP77675 is a potent inhibitor of Src family kinases. It has been reported to inhibit phosphorylation of peptide substrates and autophosphorylation of purified Src (IC_{50} = 5 - 20 nM and 40 nM, respectively), Src, and Src kinase family members such as LCK (IC_{50} = 0.02 mM and 0.29 mM, respectively). It has also been shown to inhibit epidermal growth factor receptor (EGFR), Cdc2, v-Abl, and focal adhesion kinase (FAK) (IC_{50} = 0.15 mM, > 10 mM, 0.31 mM, and 0.2 mM, respectively; Missbach et al.).

Molecular Name:	CGP77675 (Hydrate)
Alternative Names:	Not applicable
CAS Number:	Not applicable
Chemical Formula:	$C_{26}H_{29}N_5O_2 \cdot [XH_2O]$
Molecular Weight:	443.5 g/mol
Purity:	≥ 98%
Chemical Name:	1-[2-[4-[4-amino-5-(3-methoxyphenyl)-7H-pyrrolo[2,3-d]pyrimidin-7-yl]phenyl]ethyl]-4-piperidinol hydrate
Structure:	



Properties

Physical Appearance:	A crystalline solid
Storage:	Product stable at -20°C as supplied. As a precaution, STEMCELL recommends storing all small molecules away from direct light. For long-term storage, store with a desiccant. Stable as supplied for 12 months from date of receipt.
Solubility:	• DMSO ≤ 20 mM For example, to prepare a 10 mM stock solution in DMSO, resuspend 1 mg in 225 μL 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

MAINTENANCE AND SELF-RENEWAL

- In combination with the GSK3 inhibitor CHIR99021 (Catalog #72052), CGP77675 is used to maintain mouse embryonic stem (ES) cells (Shimizu et al.).
- Preserves the epigenetic and genomic integrity as well as the developmental potential of ES cells (Choi et al.).

References

- Choi J et al. (2017) Prolonged Mek1/2 suppression impairs the developmental potential of embryonic stem cells. *Nature* 548(7666): 219–23.
- Missbach M et al. (1999) A novel inhibitor of the tyrosine kinase Src suppresses phosphorylation of its major cellular substrates and reduces bone resorption in vitro and in rodent models in vivo. *Bone* 24(5): 437–49.
- Shimizu T et al. (2012) Dual inhibition of Src and GSK3 maintains mouse embryonic stem cells, whose differentiation is mechanically regulated by Src signaling. *Stem Cells* 30(7): 1394–404.

Related Small Molecules

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