

Product Data Sheet

Product Name: CMK
Cat. No.: GC14693

Chemical Properties

Cas. No. 821794-90-5

Chemical Name 1-[4-amino-7-(3-hydroxypropyl)-5-(4-methylphenyl)pyrrolo[2,3-d]pyrimidin-6-yl]-2-chloro ethanone

SMILES CC1=CC=C(C=C1)C2=C(N(C3=C2C(=NC=N3)N)CCCO)C(=O)CCl

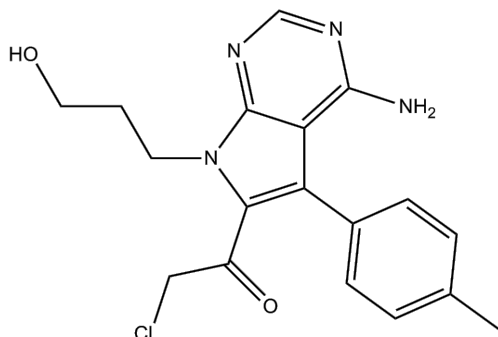
Formula $C_{18}H_{19}ClN_4O_2$ M.Wt 358.83

Solubility Soluble in DMSO Storage Store at -20°C

General tips For obtaining a higher solubility, please warm the tube at 37 °C and shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°C for several months.

Shipping Condition Evaluation sample solution: ship with blue ice. All other available size: ship with RT, or blue ice upon request.

Structure



Protocol

Caution: Product has not been fully validated for medical applications. For research use only.

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Kinase experiment: For Cdc5 kinase assays, Spc72-TAP is isolated from cell extract by pulldown with IgG sepharose or rabbit IgG coupled to M-270 epoxy dynabeads and incubated in kinase buffer (25 mM HEPES, pH 8.0, 60 mM KCl, 15 mM MnCl₂, 100 µg/mL BSA, 80 nM microcystin, 1mM DTT, 100 µM 200 µCi/mL [γ-³²P]ATP) in the absence or presence of 100 ng purified baculovirus expressed 6xHis-Cdc5. ³²P incorporation is visualized on a Typhoon PhosphorImager, and images are processed using ImageQuant software.

References:

[1]. Snead JL, et al. A coupled chemical-genetic and bioinformatic approach to Polo-like kinase pathway exploration. Chem Biol. 2007 Nov;14(11):1261-72.

Background

CMK is a RSK2 kinase inhibitor which exhibits similar potency but less chemical stability compared with FMK.

CMK inhibits the growth of Cdc5 (L158G) with IC₅₀ of 36 nM, greater than 30 µM for wild type Cdc5. CMK exhibits a concentration-dependent first cell cycle mitotic arrest in the cdc5-as1 strain with an IC₅₀ of 1.1 µM. CMK inhibition of Cdc5 (L158G) leads to a first cell cycle anaphase arrest and delay in anaphase spindle migration[1].

References:

[1]. Snead JL, et al. A coupled chemical-genetic and bioinformatic approach to Polo-like kinase pathway exploration. Chem Biol. 2007 Nov;14(11):1261-72.

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