

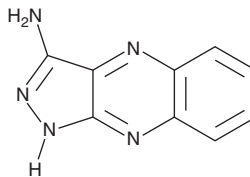
PRODUCT INFORMATION



Cdk1/5 Inhibitor

Item No. 18740

CAS Registry No.: 40254-90-8
Formal Name: 1H-pyrazolo[3,4-b]quinoxalin-3-amine
Synonyms: Cyclin-dependent kinase 1/5 Inhibitor, NSC 693868
MF: C₉H₇N₅
FW: 185.2
Purity: ≥95%
UV/Vis.: λ_{max}: 254, 334 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

Cdk1/5 Inhibitor is supplied as a crystalline solid. A stock solution may be made by dissolving the Cdk1/5 inhibitor in the solvent of choice. Cdk1/5 Inhibitor is soluble in organic solvents such as DMSO and dimethyl formamide (DMF), which should be purged with an inert gas. The solubility of Cdk1/5 inhibitor in DMSO is approximately 5 mg/ml and approximately 3 mg/ml in DMF.

Cdk1/5 Inhibitor is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, Cdk1/5 inhibitor should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. Cdk1/5 Inhibitor has a solubility of approximately 0.5 mg/ml in a 1:1 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

Cyclin-dependent kinases (Cdks) are key regulators of cell cycle progression and are therefore promising targets for cancer therapy.¹ Cdk1/5 Inhibitor is a pyrazolo [3,4-b] quinoxaline that inhibits Cdk1/cyclin B and Cdk5/p25 (IC₅₀s = 600 and 400 nM, respectively).² It less potently inhibits GSK3β (IC₅₀ = 1 μM) and does not block Cdc25 activity.² This compound is used to help define the roles of Cdk1 and Cdk5 in various signaling pathways.³⁻⁵

References

1. Bettayeb, K., Baunbaek, D., Delehouze, C., *et al.* CDK inhibitors roscovitine and CR8 trigger Mcl-1 down-regulation and apoptotic cell death in neuroblastoma cells. *Genes Cancer* **1**(4), 369-380 (2010).
2. Ortega, M.A., Montoya, M.E., Zarranz, B., *et al.* Pyrazolo[3,4-b]quinoxalines. A new class of cyclin-dependent kinases inhibitors. *Bioorg. Med. Chem.* **10**(7), 2177-2184 (2002).
3. Chen, S., Xu, Y., Yuan, X., *et al.* Androgen receptor phosphorylation and stabilization in prostate cancer by cyclin-dependent kinase 1. *Proc. Natl. Acad. Sci. USA* **103**(43), 15969-15974 (2006).
4. Nguyen, T.K. and Grant, S. Dinaciclib (SCH727965) inhibits the unfolded protein response through a CDK1- and 5-dependent mechanism. *Mol. Cancer Ther.* **13**(3), 662-674 (2014).
5. Topanurak, S., Ferraris, J.D., Li, J., *et al.* High NaCl- and urea-induced posttranslational modifications that increase glycerophosphocholine by inhibiting GDDP5 phosphodiesterase. *Proc. Natl. Acad. Sci. USA* **110**(18), 7482-7487 (2013).

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.

WARRANTY AND LIMITATION OF REMEDY

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