

Product Datasheet

Dinaciclib

Catalog No. **BP-02333** · CAS **779353-01-4** · Form **free base** · Physical state **solid** · Color **Off-white to yellow** · Version **1.0** · Revision **2026-09-10**

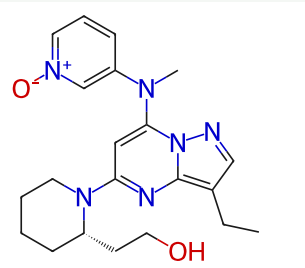
FOR RESEARCH USE ONLY. NOT FOR HUMAN OR VETERINARY USE.

Target CDK; Apoptosis	Research area Cancer
---------------------------------	--------------------------------

Molecular formula **C₂₁H₂₈N₆O₂**

Molecular weight **396.4860**

STRUCTURE



DESCRIPTION

Dinaciclib (SCH 727965) is a potent inhibitor of CDK, with IC₅₀s of 1 nM, 1 nM, 3 nM, and 4 nM for CDK2, CDK5, CDK1, and CDK9, respectively.

BIOLOGICAL ACTIVITY

SCH727965 (Dinaciclib) is a novel small molecule multi-CDK inhibitor with low nanomolar potency against CDK1, CDK2, CDK5 and CDK9 that has shown favorable toxicity and efficacy in preliminary mouse experiments, and has been well tolerated in Phase I clinical trials. Cyclin-dependent kinases (CDK) are key positive regulators of cell cycle progression and attractive targets in oncology. SCH727965 was selected as a clinical candidate using a functional screen in vivo that integrated both efficacy and safety parameters. Compared with flavopiridol, SCH727965 exhibits superior activity with an improved therapeutic index. In cell-based assays, SCH727965 completely suppressed retinoblastoma phosphorylation, which correlated with apoptosis onset and total inhibition of bromodeoxyuridine incorporation in >100 tumor cell lines of diverse origin and background. Moreover, short exposures to SCH727965 were sufficient for long-lasting cellular effects. SCH727965 induced regression of established solid tumors in a range of mouse models following intermittent scheduling of doses below the maximally tolerated level. These results suggest that SCH727965 is a potent and selective CDK inhibitor and a novel cytotoxic agent.

SOLUBILITY

Soluble in DMSO

REFERENCES

[1]. Parry D, et al. Dinaciclib (SCH 727965), a novel and potent cyclin-dependent kinase inhibitor. Mol Cancer Ther. 2010 Aug;9(8):2344-53.

[2]. Feldmann G, et al. Cyclin-dependent kinase inhibitor Dinaciclib (SCH727965) inhibits pancreatic cancer growth and progression in murine xenograft models. *Cancer Biol Ther.* 2011 Oct 1;12(7):598-609.

Tel: +86 20 31130026 · Fax: +86 20 36822386 · tech@biochemprobe.com · www.biochemprobe.com

BiochemProbe is the catalog brand of Guangzhou Yuyuan Biotech Co., Ltd. · For research use only.

Lot CoA and SDS are separate documents.