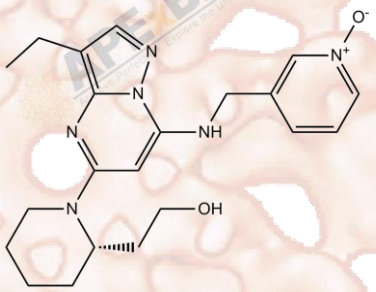
Product Data Sheet

# Dinaciclib (SCH727965)

**Cat. No.:** A8412
**CAS No.:** 779353-01-4
**Formula:** C21H28N6O2
**M.Wt:** 396.49
**Synonyms:**
**Target:** Cell Cycle/Checkpoint
**Pathway:** Cyclin-Dependent Kinases
**Storage:** Store at -20°C



## Solvent & Solubility

In Vitro

insoluble in H2O; ⩾10.22 mg/mL in EtOH; ⩾17.15 mg/mL in DMSO

Preparing Stock Solutions

| Mass / Solvent / Concentration | 1mg | 5mg | 10mg |
|---|---|---|---|
| **1 mM** | 2.5221 mL | 12.6107 mL | 25.2213 mL |
| **5 mM** | 0.5044 mL | 2.5221 mL | 5.0443 mL |
| **10 mM** | 0.2522 mL | 1.2611 mL | 2.5221 mL |

Please refer to the solubility information to select the appropriate solvent.

## Biological Activity

| | |
|---|---|
| Shortsummary | Potent CDK inhibitor |
| $IC_{50}$ & Target | 1 nM (CDK2), 1 nM (CDK5), 3 nM (CDK1), 4 nM (CDK9) |

In Vitro

**Cell Viability Assay**

| | |
|---|---|
| Cell Line: | A2780 cells |
| Preparation method: | Limited solubility. General tips for obtaining a higher concentration: Please warm the tube at 37 °C for 10 minutes and/or shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°C for several months. |
| Reacting conditions: | 2 h |

| | | |
|---|---|---|
| | Applications: | SCH 727965 significantly abrogates phosphorylation of Rb on Ser 807/811 at concentrations >6.25 nmol/L and also leads to the generation of the p85 PARP cleavage product. 100 nmol/L SCH727965 treatment for 2 hours is effective in inducing suppression of Rb phosphorylation and caspase activation which can be detected up to 6 hours later. |
| In Vivo | **Animal experiment** | |
| | Animal models: | A2780 ovarian cancer mouse xenograft model |
| | Dosage form: | i.p. administration at 8, 16, 32, and 48 mg/kg daily |
| | Applications: | SCH 727965 i.p. administration at 8, 16, 32, and 48 mg/kg daily for 10 days shows tumor inhibitionby 70%, 70%, 89%, and 96%, respectively. SCH 727965 is also well tolerated, and the maximum body weight loss in the highest dosage group is 5%. |
| | Other notes: | Please test the solubility of all compounds indoor, and the actual solubility may slightly differ with the theoretical value. This is caused by an experimental system error and it is normal. |

## Product Citations


1. Rello-Varona S, Fuentes-Guirado M, et al. "Bcl-x(L) inhibition enhances Dinaciclib-induced cell death in soft-tissue sarcomas." Sci Rep. 2019 Mar 7;9(1):3816.PMID:30846724

2. Cingöz O, Goff SP. "Cyclin-dependent kinase activity is required for type I interferon production." Proc Natl Acad Sci U S A. 2018 Mar 27;115(13):E2950-E2959.PMID:29507205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## References


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


## Caution

**FOR RESEARCH PURPOSES ONLY.**

**NOT FOR HUMAN, VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.**

*Specific storage and handling information for each product is indicated on the product datasheet. Most APExBIO products are stable under the recommended conditions. Products are sometimes shipped at a temperature that differs from the recommended storage temperature. Shortterm storage of many products are stable in the short-term at temperatures that differ from that required for long-term storage. We ensure that the product is shipped under conditions that will maintain the quality of the reagents. Upon receipt of the product, follow the storage recommendations on the product data sheet.*

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