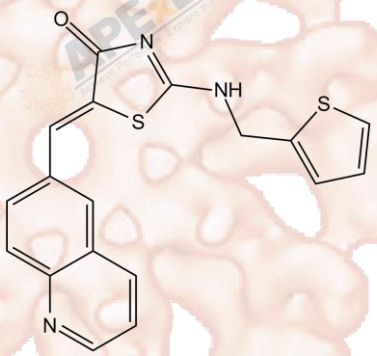
Product Data Sheet

# Ro 3306

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|---|---|
| **Cat. No.:** | A8885 |
| **CAS No.:** | 872573-93-8 |
| **Formula:** | C18H13N3OS2 |
| **M.Wt:** | 351.45 |
| **Synonyms:** | |
| **Target:** | Cell Cycle/Checkpoint |
| **Pathway:** | Cyclin-Dependent Kinases |
| **Storage:** | Store at -20°C |

## Solvent & Solubility

In Vitro

insoluble in EtOH; insoluble in H2O; ⩾4.39 mg/mL in DMSO

Preparing Stock Solutions

| Mass / Solvent / Concentration | 1mg | 5mg | 10mg |
|---|---|---|---|
| **1 mM** | 2.8454 mL | 14.2268 mL | 28.4535 mL |
| **5 mM** | 0.5691 mL | 2.8454 mL | 5.6907 mL |
| **10 mM** | 0.2845 mL | 1.4227 mL | 2.8454 mL |

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

## Biological Activity

| | |
|---|---|
| Shortsummary | An ATP-competitive, potent CDK1 inhibitor |
| $IC_{50}$ & Target | |

In Vitro

**Cell Viability Assay**

| | |
|---|---|
| Cell Line: | Proliferating human cells HCT116, SW480, Hela |
| Preparation method: | The solubility of this compound in DMSO is >4.4 mg/mL. 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: | 9 μM, 20 h, |

| | | |
|---|---|---|
| | Applications: | Treatment of proliferating human cancer cells (HCT116, SW480, and HeLa) with RO-3306 for 20 h completely blocked the cell cycle in the G2/M phase. In cancer cell lines (RKO, SJSA, MDAMB-435, and DU145) RO-3306 provided an effective means for cell synchronization in the late G2 phase. HeLa cells were enriched in mitotic cells by release from RO-3306 block (9 μM for 18 h) and followed for morphological changes in the absence or presence of 9 μM RO-3306. Treatment with 4 μM RO-3306 for 48 h induced apoptosis in cancer cells. |
| In Vivo | **Animal experiment** | |
| | Applications: | |
| | 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. Liu JC, Granieri L, et al. "Identification of CDC25 as a Common Therapeutic Targetfor Triple-Negative Breast Cancer." Cell Rep. 2018 Apr 3;23(1):112-126.PMID:29617654

2. Özer Ö, Bhowmick R, et al. "Human cancer cells utilize mitotic DNAsynthesis to resist replication stress at telomeres regardless of their telomere maintenance mechanism." Oncotarget. 2018 Mar 23;9(22):15836-15846.PMID:29662610

3. Azimi A, Caramuta S, et al. "Targeting CDK2 overcomes melanoma resistanceagainst BRAF and Hsp90 inhibitors." Mol Syst BioI. 2018 Mar 5;14(3):e7858.PMID:29507054

4. Arpita Mukherjee, Upayan Patra, et al. "Rotaviral non‐structural protein 4 triggers Dynamin related protein 1‐dependent mitochondrial fragmentation during infection." CELLULAR MICROBIOLOGY.2018.February 28.


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## References


[1]. Vassilev L T, Tovar C, Chen S, et al. Selective small-molecule inhibitor reveals critical mitotic functions of human CDK1[J]. Proceedings of the National Academy of Sciences, 2006, 103(28): 10660-10665.


## 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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