# SR-4835

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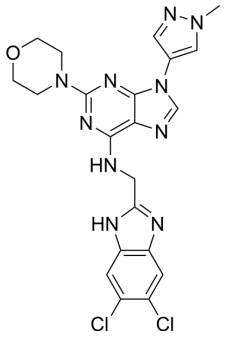
|---|---|
| **Cat. No.:** | HY-130250 |
| **CAS No.:** | 2387704-62-1 |
| **Molecular Formula:** | $C_{21}H_{20}Cl_2N_{10}O$ |
| **Molecular Weight:** | 499.36 |
| **Target:** | CDK; Apoptosis |
| **Pathway:** | Cell Cycle/DNA Damage; Apoptosis |
| **Storage:** | Powder -20°C 3 years<br>4°C 2 years<br>In solvent -80°C 1 year<br>-20°C 6 months |



## SOLVENT & SOLUBILITY

**In Vitro**

DMSO : 25 mg/mL (50.06 mM; ultrasonic and warming and heat to 60°C)

$H_2O$ : < 0.1 mg/mL (ultrasonic;warming;heat to 60°C) (insoluble)

**Preparing Stock Solutions**

| Solvent / Mass / Concentration | 1 mg | 5 mg | 10 mg |
|---|---|---|---|
| 1 mM | 2.0026 mL | 10.0128 mL | 20.0256 mL |
| 5 mM | 0.4005 mL | 2.0026 mL | 4.0051 mL |
| 10 mM | 0.2003 mL | 1.0013 mL | 2.0026 mL |

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

**In Vivo**

1. Add each solvent one by one: 20% HP-β-CD in saline
   Solubility: 5 mg/mL (10.01 mM); Suspended solution; Need ultrasonic
2. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
   Solubility: 2 mg/mL (4.01 mM); Suspended solution; Need ultrasonic
3. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 0.89 mg/mL (1.78 mM); Clear solution

## BIOLOGICAL ACTIVITY

**Description**

SR-4835 is a potent, highly selective and ATP competitive dual inhibitor of CDK12/CDK13 (CDK12: $IC_{50}$=99 nM, $K_d$=98 nM; CDK13: $K_d$=4.9 nM). SR-4835 acts in synergy with DNA-damaging chemotherapy and PARP inhibitors and provokes triple-negative breast cancer (TNBC) cell death[1].

| **$IC_{50}$ & Target** | CDK12 | CDK12 | CDK13 |
|---|---|---|---|
| | 99 nM ($IC_{50}$) | 98 nM (Kd) | 4.9 nM (Kd) |

**In Vitro**

SR-4835 (90 nM; 0.5-48 hours) suppresses ATM and RAD51 protein levels[1].

?SR-4835 inhibits CDK12/CDK13 which triggers intronic polyadenylation site cleavage and suppresses the expression of core DNA damage response proteins[1].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Western Blot Analysis[1]

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|---|---|
| Cell Line: | MDA-MB-231 cells |
| Concentration: | 90 nM |
| Incubation Time: | 0.5, 6, 24, 48 hours |
| Result: | Suppressed ATM and RAD51 protein levels. |

## CUSTOMER VALIDATION

- Mol Cell. 2024 Apr 26:S1097-2765(24)00285-5.
- J Exp Clin Cancer Res. 2023 Aug 21;42(1):214.
- Cancer Lett. 2024 May 1:589:216820.
- Breast Cancer Res. 2023 May 5;25(1):51.
- J Biol Chem. 2023 Nov 26:105501.

See more customer validations on www.MedChemExpress.com

## REFERENCES

[1]. Quereda V, et al. Therapeutic Targeting of CDK12/CDK13 in Triple-Negative Breast Cancer. Cancer Cell. 2019 Oct 8. pii: S1535-6108(19)30424-6.



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