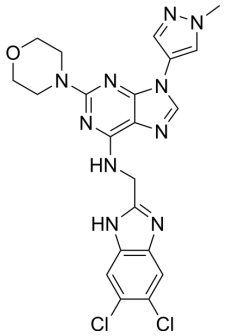
SR-4835

Cat. No.:	HY-130250
CAS No.:	2387704-62-1
Molecular Formula:	$C_{21}H_{20}Cl_2N_{10}O$
Molecular Weight:	499
Target:	CDK; Apoptosis
Pathway:	Cell Cycle/DNA Damage; Apoptosis
Storage:	Powder -20°C 3 years 4°C 2 years In solvent -80°C 1 year -20°C 6 months



SOLVENT & SOLUBILITY

In Vitro

DMSO : 12.5 mg/mL (25.05 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	Mass / Solvent / Concentration	1 mg	5 mg	10 mg
	1 mM	2.0040 mL	10.0200 mL	20.0401 mL
	5 mM	0.4008 mL	2.0040 mL	4.0080 mL
	10 mM	0.2004 mL	1.0020 mL	2.0040 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 (10.02 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 99 nM (IC_{50})	CDK12 98 nM (Kd)	CDK13 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]

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

- J Exp Clin Cancer Res. 2023 Aug 21;42(1):214.
- Breast Cancer Res. 2023 May 5;25(1):51.
- J Biol Chem. 2023 Nov 26:105501.
- Oncologie. 2023 Aug 8.
- Research Square Preprint. 2024 Jan 31.

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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.

Caution: Product has not been fully validated for medical applications. For research use only.

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