C105SR

Cat. No.: HY-157088

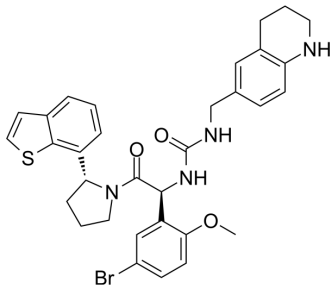
Molecular Formula: $C_{32}H_{33}BrN_4O_3S$

Molecular Weight: 633.6

Target: Caspase; Apoptosis

Pathway: Apoptosis

Storage: Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description

C105SR is a cyclophilin D (CypD) inhibitor targeting to peptidyl-prolylcis-trans isomerase (PPIase). C105SR inhibits mitochondrial permeability transition opening (mPTP) with an IC_{50} of 5 nM. C105SR inhibits hypoxia and reoxygenation inudced hepatocyte apoptosis and increases the level of calcium retention capacity (CRC). C105SR exhibits hepaprotective effect in ischaemia-reperfusion injury (IRI) mouse model[1].

IC_{50} & Target		
	Caspase 3	Caspase-7

In Vitro

C105SR (0.5/1/5/10/50/100 μM) inhibit CypD PPIase activity in Mitochondria[1].
C105SR (1μM, 4 h for hypoxia (1% O_2) plus 1 h for reoxygenation (21% O_2)) prevent mPTP opening [1].
C105SR (0.5/1/5/10/50/100 μM, 4 h for hypoxia (1% O_2) plus 2 h for reoxygenation (21% O_2)) reducing hypoxia/reoxygenation-induced cell death in AML-12 cell[1] .

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

Cell Viability Assay[1]

Cell Line:	AML-12 cell
Concentration:	0.5/1/10/50/100 μM
Incubation Time:	4 h for hypoxia (1% O_2) plus 2 h for reoxygenation (21% O_2)
Result:	Reduced LDH release and increased cell viability by approximatively 75% at 0.5μM.

In Vivo

C105SR (50 mg/kg, Subcutaneous injection (s.c.), 24 h before ischaemia–reperfusion injury (IRI) surgical procedure, single dose) has protective properties in hepatic IRI model [1].

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Animal Model:	Hepatic IRI model [1]
Dosage:	50 mg/kg
Administration:	Subcutaneous injection (s.c.)
Result:	Protected mouse livers against the effects of ischaemia and reperfusion.

REFERENCES

[1]. Kheyar A, et al. The novel cyclophilin inhibitor C105SR reduces hepatic ischaemia–reperfusion injury via mitoprotection [J]. JHEP Reports, 2023, 5(11): 100876.

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

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