

SPC5001

Cat. No.:	HY-148687
Molecular Weight:	4689.85
Target:	Others
Pathway:	Others
Storage:	-20°C, sealed storage, away from moisture * In solvent : -80°C, 6 months; -20°C, 1 month (sealed storage, away from moisture)

SPC5001

SOLVENT & SOLUBILITY

In Vitro

H₂O : ≥ 100 mg/mL (21.32 mM)
* "≥" means soluble, but saturation unknown.

Preparing Stock Solutions	Solvent	Mass	1 mg	5 mg	10 mg
	Concentration				
	1 mM		0.2132 mL	1.0661 mL	2.1323 mL
	5 mM		0.0426 mL	0.2132 mL	0.4265 mL
	10 mM		0.0213 mL	0.1066 mL	0.2132 mL

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

BIOLOGICAL ACTIVITY

Description

SPC5001 is a locked nucleic acid (LNA)-modified antisense oligonucleotide (ASO) complementary to human PCSK9 (proprotein convertase subtilisin/kexin type 9) mRNA. SPC5001 can be used for the research of hypercholesterolemia. SPC5001 sequence: 5'-TGmCTACAAAACmCmCA-3'^[1].

In Vitro

SPC5001 (0.16-40 μM; 72 h) induces the downregulation of PCSK9 mRNA targets but cytotoxicity is not observed at any concentration in 2D human renal proximal tubule epithelial cells (HRPTEC) cultures^[1].
SPC5001 (5 μM; 48 h or 20 d) downregulates PCSK9 mRNA in chip-cultured HRPTEC, with 74.1% and 93.7% for 48 h and 20 days, respectively^[1].
SPC5001 (5 μM; 20 d) induces cytotoxicity and increases perfusate levels of biomarkers KIM-1, NGAL, clusterin, osteopontin and VEGF in chip-cultured HRPTEC^[1].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

[1]. Nieskens TTG, et, al. Nephrotoxic antisense oligonucleotide SPC5001 induces kidney injury biomarkers in a proximal tubule-on-a-chip. Arch Toxicol. 2021 Jun;95(6):2123-2136.

[2]. Lindholm MW, Elmén J, Fisker N, et al. PCSK9 LNA antisense oligonucleotides induce sustained reduction of LDL cholesterol in nonhuman primates. Mol Ther. 2012;20(2):376-381.

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

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