

Miravirsen

Cat. No.:	HY-132598
CAS No.:	1072874-90-8
Molecular Weight:	4967
Sequence:	RNA, (P-thio)((2'-O,4'-C-methylene)m5C-dC-(2'-O,4'-C-methylene)A-dT-dT-(2'-O,4'-C-methylene)G-(2'-O,4'-C-methylene)m5U-dC-dA-(2'-O,4'-C-methylene)m5C-dA-(2'-O,4'-C-methylene)m5C-dT-(2'-O,4'-C-methylene)m5C-(2'-O,4'-C-methylene)m5C)
Target:	MicroRNA; HCV
Pathway:	Epigenetics; Anti-infection
Storage:	-20°C, stored under nitrogen * In solvent : -80°C, 6 months; -20°C, 1 month (stored under nitrogen)

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SOLVENT & SOLUBILITY

In Vitro	H ₂ O : 100 mg/mL (20.13 mM; Need ultrasonic)					
		Solvent Concentration	Mass	1 mg	5 mg	10 mg
	Preparing Stock Solutions	1 mM	0.2013 mL	1.0066 mL	2.0133 mL	
		5 mM	0.0403 mL	0.2013 mL	0.4027 mL	
10 mM		0.0201 mL	0.1007 mL	0.2013 mL		
Please refer to the solubility information to select the appropriate solvent.						
In Vivo	1. Add each solvent one by one: PBS Solubility: 14.29 mg/mL (2.88 mM); Clear solution; Need ultrasonic					

BIOLOGICAL ACTIVITY

Description	Miravirsen (SPC-3649) is a potent miR-122 inhibitor and inhibits the biogenesis of miR-122. Miravirsen is a 15-nucleotide locked nucleic acid-modified phosphorothioate antisense oligonucleotide. Miravirsen inhibits HCV replication. Miravirsen can be used in research of HCV infection ^{[1][2]} .
IC₅₀ & Target	miR-122 ^[1]
In Vitro	Miravirsen is thought to work mainly by hybridizing to mature miR-122 and blocking its interaction with HCV RNA, its target sequence is also present in pri- and pre-miR-122 ^[1] . Miravirsen binds to the stem-loop structure of pri- and pre-miR-122 with nanomolar affinity, and inhibits both Dicer- and Drosha-mediated processing of miR-122 precursors ^[1] . MCE has not independently confirmed the accuracy of these methods. They are for reference only.

In Vivo

Miravirsen (SPC-3649; 2.5-25 mg/kg; i.v.; daily, for 3 d) inhibits miR-122 activity in mice^[2].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Animal Model:	NMRI female mice (27 g) ^[2]
Dosage:	2.5, 6.25, 12.5, and 25 mg/kg
Administration:	Intravenous injection; daily, for 3 days
Result:	Inhibited miR-122 activity in a dose-dependent manner.

REFERENCES

[1]. Elmén J, et, al. Antagonism of microRNA-122 in mice by systemically administered LNA-antimiR leads to up-regulation of a large set of predicted target mRNAs in the liver. *Nucleic Acids Res.* 2008 Mar;36(4):1153-62.

[2]. Luca F R Gebert, et al. Miravirsen (SPC3649) can inhibit the biogenesis of miR-122. *Nucleic Acids Res.* 2014 Jan;42(1):609-21.

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

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