

## Fomivirsen sodium

Cat. No.:	HY-109528
CAS No.:	160369-77-7
Molecular Weight:	7122.09
Sequence:	DNA, d(P-thio)(G-C-G-T-T-T-G-C-T-C-T-T-C-T-T-C-T-T-G-C-G), eicosasodium salt
Target:	CMV
Pathway:	Anti-infection
Storage:	-20°C, stored under nitrogen * In solvent : -80°C, 6 months; -20°C, 1 month (stored under nitrogen)

## Fomivirsen (sodium)

### SOLVENT & SOLUBILITY

In Vitro	H <sub>2</sub> O : 100 mg/mL (14.04 mM); Need ultrasonic)					
	Preparing Stock Solutions	Solvent Concentration	Mass	1 mg	5 mg	10 mg
			1 mM	0.1404 mL	0.7020 mL	1.4041 mL
			5 mM	0.0281 mL	0.1404 mL	0.2808 mL
			10 mM	0.0140 mL	0.0702 mL	0.1404 mL
Please refer to the solubility information to select the appropriate solvent.						
In Vivo	1. Add each solvent one by one: PBS Solubility: 100 mg/mL (14.04 mM); Clear solution; Need ultrasonic					

### BIOLOGICAL ACTIVITY

Description	Fomivirsen (ISIS-2922) sodium is an antisense 21 mer phosphorothioate oligonucleotide. Fomivirsen sodium is an antiviral agent that is used cytomegalovirus retinitis (CMV) research, including in AIDs. Fomivirsen sodium binds to and degrades the mRNAs encoding CMV immediate-early 2 protein, thus inhibiting virus proliferation <sup>[1][2]</sup> .
In Vitro	Antisense oligonucleotide acts a complementary nucleotide to the messenger RNA of the major immediate-early region proteins of human cytomegalovirus, it disrupts the replication of the virus through an antisense mechanism <sup>[1]</sup> . Fomivirsen is 21-mer phosphorothioate ASO with CpG motif near its 5' end, with the sequence 5'-GCG TTT GCT CTT CTT CTT GCG-3', resulting in mRNA degradation by RNase H-mediated mechanism <sup>[2]</sup> . Fomivirsen inhibits CMV replication in human retinal pigment epithelial (RPE) cells and in human fibroblast cells (MRC-5 cells) in a dose-dependent manner. The mean IC <sub>50</sub> are 0.03 μM for RPE cells and 0.2 μM for MRC5 cells <sup>[1]</sup> . MCE has not independently confirmed the accuracy of these methods. They are for reference only.

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## REFERENCES

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- [1]. M D de Smet, et al. Fomivirsen- a phosphorothioate oligonucleotide for the treatment of CMV retinitis. Ocul Immunol Inflamm. 1999 Dec;7(3-4):189-98.
- [2]. Anna Kilanowska, et al. In vivo and in vitro studies of antisense oligonucleotides – a review. (Review Article) RSC Adv., 2020, 10, 34501-34516
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**Caution: Product has not been fully validated for medical applications. For research use only.**

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