

Product Data Sheet

Product Name: Fomivirsen sodium

Cat. No.: GC64041

Chemical Properties

Cas. No. 160369-77-7

Formula $C_{204}H_{263}N_{63}O_{114}P_{20}S_{20}\cdot 20Na$ M.Wt 6682.40

Solubility H_2O : 100 mg/mL (14.04 mM; Need ultrasonic) Storage $-20^{\circ}C$, stored under nitrogen

General tips For obtaining a higher solubility , please warm the tube at $37^{\circ}C$ and shake it in the ultrasonic bath for a while. Stock solution can be stored below $-20^{\circ}C$ for several months.

Shipping Condition Evaluation sample solution : ship with blue ice All other available size: ship with RT , or blue ice upon request.

Structure

Fomivirsen (sodium)

Background

Fomivirsen sodium is an antisense 21 mer phosphorothioate oligonucleotide. Fomivirsen 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 (required for viral replication), thus providing bioactive effects for CMV retinitis by inhibition of virus proliferation[1].

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

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

Tel: (909) 407-4943 Fax: (626) 353-8530 E-mail: tech@glpbio.com

Address: 10292 Central Ave. #205, Montclair, CA, USA

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through an antisense mechanism[1]. 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[2]. 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 IC₅₀ are 0.03 μ M for RPE cells and 0.2 μ M for MRC5 cells[1].

[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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