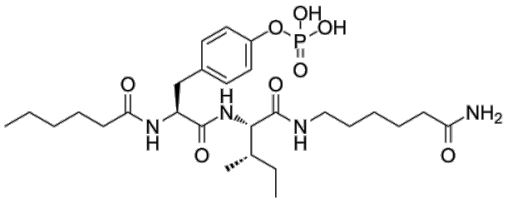
Product Data Sheet

Product Name: Fosgonimeton
Cat. No.: GC64708

Chemical Properties

Cas. No.	2093305-05-4		
Formula	C27H45N4O8P	M.Wt	584.64
Solubility	DMSO : 125 mg/mL (213.81 mM; Need ultrasonic)	Storage	Store at -20°C, protect from light, stored under nitrogen
General tips	For obtaining a higher solubility , please warm the tube at 37 °C and shake it in the ultrasonic bath for a while.Stock solution can be stored below -20°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			



Protocol

Animal experiment [1]:

Animal models	Aβ peptides treated adult male Wistar rats

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Preparation Method	Fosgonimeton (0.125, 0.25, 0.5, 1, or 2mg/kg) or vehicle were administered subcutaneously from day of surgery (study day 0) to study day 14. On study day 14, rats underwent the passive avoidance acquisition paradigm, where entering a darkened compartment is associated with receiving a mild foot shock.
Dosage form	0.125, 0.25, 0.5, 1 and 2mg/kg/d; 14d; s.c.
Applications	Significantly restored cognitive function at all doses tested. The maximum average degree of recovery was 88% recovery in 0.125mg/kg treated group.

References:
[1] Reda SM, Setti SE, Berthiaume AA, et al. Fosgonimeton attenuates amyloid-beta toxicity in preclinical models of Alzheimer's disease. *Neurotherapeutics*. 2024;21(4):e00350.

Background

Fosgonimeton is a highly specific small-molecule positive modulator of the HGF/MET(Hepatocyte Growth Factor/Mesenchymal-Epithelial Transition) neurotrophic system. Fosgonimeton is a prodrug optimized for subcutaneous (SC) administration and is rapidly converted into the active metabolite fosgo-AM in plasma. Fosgo-AM crosses the blood-brain barrier and enhances the interaction of HGF with its receptor tyrosine kinase MET, inducing downstream signaling through PI3k/Akt and MAPK pathways and augmenting N-methyl-D-aspartate (NMDA) receptor-mediated long-term potentiation through protein kinase C. Fosgonimeton has demonstrated neurotrophic and pro-cognitive effects in preclinical models of dementia[1][2].

In vivo, Subcutaneous administration of Fosgonimeton (0.125, 0.25, 0.5, 1, and 2mg/kg) for 14 days significantly restored cognitive function at all tested doses in Aβ peptide-treated adult male Wistar rats[2]. Subcutaneous administration of Fosgonimeton at doses of 0.25, 0.5, and 1.25mg/kg for 14 consecutive days significantly improved cognitive deficits in LPS-treated CD-1 mice[3].

References:
[1] ua X, Church K, Walker W, et al. Safety, Tolerability, Pharmacokinetics, and Pharmacodynamics of the Positive Modulator of HGF/MET, Fosgonimeton, in Healthy Volunteers and Subjects with

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Alzheimer's Disease: Randomized, Placebo-Controlled, Double-Blind, Phase I Clinical Trial. *J Alzheimers Dis*. 2022;86(3):1399-1413.
[2] Reda SM, Setti SE, Berthiaume AA, et al. Fosgonimeton attenuates amyloid-beta toxicity in preclinical models of Alzheimer's disease. *Neurotherapeutics*. 2024;21(4):e00350.
[3] Johnston JL, et al. Fosgonimeton, a Novel Positive Modulator of the HGF/MET System, Promotes Neurotrophic and Procognitive Effects in Models of Dementia. Neurotherapeutics. 2023 Mar;20(2):431-451.

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