

Product Data Sheet

Product Name: GHP-88310

Cat. No.: GC81756

Chemical Properties

Cas. No.

Formula $C_{16}H_{14}N_4O$ M.Wt 278.31

Solubility DMSO: 0.5 mg/mL (1.80 mM; ultrasonic and warming and heat to 60°C) Storage Store at 4°C, sealed storage, away from moisture

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



Background

GHP-88310 is an orally active broad-spectrum paramyxovirus and orthomyxovirus inhibitor that targets the L protein - RdRP complex, and exhibits activity against respiratory viruses and viruses of the genus Morbillivirus [1] [2]. GHP-88310 binds to the central cavity of the polymerase protein, blocks replicase and transcriptase activities, interferes with the viral life cycle and inhibits viral replication [1] [2]. GHP-88310 can be used in studies of paramyxovirus infections, including

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

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morbillivirus-like diseases, human parainfluenza virus type 3 infection and measles [1] [2].

In Vivo, GHP-88310 (150 mg/kg; p.o.; twice daily) achieves 100% survival rate in directly exposed ferrets, and completely inhibits the transmission, viremia and clinical signs of canine distemper virus^[1]. GHP-88310 (100-150 mg/kg; oral administration; twice daily) yields a 100% survival rate in ferrets exposed to canine distemper virus via air, and the twice-daily dosing regimen achieves complete blockage of transmission^[1]. GHP-88310 (150 mg/kg; p.o.; twice daily) results in 100% survival of ferret source animals infected with canine distemper virus, blocks virus transmission from these source animals to contact ferrets, and shortens the infectious period of the source animals by 5 days^[1]. GHP-88310 (150 mg/kg; p.o.; twice daily; 7.5 days) confers 100% survival rate in SeV-infected 129X1/SvJ mice and significantly reduces their respiratory viral load^[2]. GHP-88310 (16.5-150 mg/kg; p.o.; twice daily, once daily; for 3 consecutive days) exhibits potent anti-HPIV3 activity in cotton rats, and significantly reduces viral loads at doses as low as 16.5 mg/kg twice daily or 150 mg/kg once daily^[2]. GHP-88310 (50-150 mg/kg; p.o.; twice daily, once daily; 7-18 days) achieves 100% survival in ferrets with lethal CDV-induced measles-like disease, reduces viremia and viral shedding levels, and alleviates lymphopenia; at a dose of 150 mg/kg twice daily, the drug exhibits sterilizing efficacy^[2]. GHP-88310 (300-1200 mg/kg; p.o.; twice daily; 7 days) is well tolerated by cotton rats at daily doses up to 2400 mg/kg, with plasma exposure showing a positive correlation with dose^[2]. GHP-88310 (50-1000 mg/kg; p.o.; twice daily; for 7 consecutive days) is well tolerated in ferrets even at a daily dose of up to 2000 mg/kg, with plasma exposure proportional to the dose, and no hematological or clinical adverse reactions are detected^[2]. GHP-88310 (50-500 mg/kg; p.o.; single administration) is well tolerated in beagle dogs, with plasma exposure showing a dose-dependent pattern^[2].

In Vitro, GHP-88310 (80 μ M; 2 h) displays high plasma-membrane permeability, reaching an intracellular exposure plateau of approximately 105 pmol per 106 cells within 15 minutes of wash-in in undifferentiated human bronchial tracheal epithelial cells (HBTECs)^[2]. GHP-88310 (50 μ M) shows submicromolar potency and a steep Hill slope against HPIV3 in undifferentiated HBTECs, with fully sterilizing efficacy at concentrations of 10 μ M and above^[2]. GHP-88310 (0-200 μ M; 48 h) is well tolerated in well-differentiated human airway epithelium organoids at the highest physiologically achievable concentrations without disturbing tissue integrity^[2].

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References:

- [1]. Lieber CM, et al. Antiviral GHP-88310 blocks contact-mediated and airborne transmission in a ferret model of measles-like disease. *Nature microbiology*. 2026 Jul 24.
- [2]. Lieber CM, et al. Developmental candidate GHP-88310/EIDD-3608 with high tolerability and oral efficacy in measles and respiratory paramyxovirus models. *Science advances*. 2026 May 22;12(21):eaef1594.

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