Datasheet

BSV-S8932

Product Name	Inhibitor Remdesivir (GS-5734)
Catalogue Number	BSV-S8932
Chemical Formula	$C_{27}H_{35}N_6O_8P$
Function	Anti-infection inhibitor
CAS No.	1809249-37-3

Description:

Remdesivir, a monophosphoramidate prodrug of an adenosine analog, is an investigational broad-spectrum **antiviral** agent with in vitro activity against multiple RNA viruses, including Ebola and CoV.

Product Details:

Chemical name: L-Alanine, N-[(S)-hydroxyphenoxyphosphinyl]-, 2-ethylbutyl ester, 6-ester with 2-C-(4-aminopyrrolo[2,1-f][1,2,4]triazin-7-yl)-2,5-anhydro-D-altrononitrile

Formula: $C_{27}H_{35}N_6O_8P$

Molecular weight: 602.58

Purity: 99.31 % (HPLC)

Storage: 3 years -20°C powder, 2 years -80°C in solvent

Regulatory/ Restrictions: For laboratory use only.

Biological Activity:

In vitro:
GS-5734 exhibits antiviral activity against multiple variants of EBOV in cell-based assays(EC50=0.06-0.14 μM) and broad-spectrum antiviral activity in vitro against other pathogenic RNA viruses. [1]GS-5734 acts as a broad-spectrum therapeutic to protect against CoVs with EC50 of 0.03 μM for murine hepatitis virus in delayed brain tumor cells and 0.074 μM for SARS-CoV and MERS-CoV in HAE cells.[2]

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In vivo:
Regardless of the time of initiation, GS-5734 treatment confers improved survival when administered by 3 mg/kg GS-5734. All animals in which 10 mg/kg GS-5734 treatments is initiated 3 days after virus exposure survive to the end of the in-life phase. However, the antiviral effects are consistently greater in animals administered repeated 10 mg/kg GS-5734 doses. The 10 mg/kg D3 (administered beginning 3 days after virus exposure) GS-5734 regimen is associated with amelioration of EVD-related clinical disease signs and markers of coagulopathy and end organ pathophysiology.[1]

Animal research (only for reference)

- **Animal Models:** Rhesus monkeys (Macaca mulatta)
- **Formulation:** 12% sulfobutylether-β-cyclodextrin (SBE-β-CD), pH adjusted to 3.0 using HCl
- **Dosages:** 3 mg / kg, 10 mg / kg
- **Administration:** IV

References:

- [1] Warren TK, et al. Nature. 2016 17;531(7594):381-5.
- [2] Agostini ML, et al. mBio. 2018 6;9(2).