Web: www.taiclone.com
Tel: +886-2-2735-9682
Email: order@taiclone.com

RD3-0028

Catalog No: tcsc0018437

Available Sizes

Size: 1mg

Size: 5mg

Size: 10mg

Specifications

CAS No:
3886-39-3

Formula:
$C_8H_8S_2$

Pathway:
Anti-infection

Target:
RSV

Purity / Grade:
>98%

Solubility:
10 mM in DMSO

Observed Molecular Weight:
168.28

Product Description

RD3-0028 is a potent and selective inhibitor of **RSV** replication with an **EC_{50}** of 4.5 μM.

IC50 & Target: EC50: 4.5 μM (RSV)[1]

In Vitro:

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RD3-0028 has a 50% effective concentration of 4.5 μM and a 50% cytotoxic concentration of 271.0μM which is superior to that of ribavirin. RD3-0028 inhibits different RSV strains at a low concentration (4.5-11.0 μM) using the MTT method. Using the MTT method, EC_{50} values of RD3-0028 against tested strains are lower than those of ribavirin. RD3-0028 does not inhibit the replication of measles virus, influenza A virus, herpes simplex virus types 1 and 2, or human cytomegalovirus[1].

In Vivo: Aerosols generated from reservoirs containing RD3-0028 (7 mg/mL) administered for 2 h twice daily for 3 days significantly reduces the pulmonary titer of RSV-infected mice. It is clear that the minimal effective dose of RD3-0028 for RSV-infected mice is significantly less than that of ribavirin, the only compound currently available for use against RSV disease. Furthermore, the RD3-0028 aerosol administration protect the lungs of infected, CYP-treated mice against tissue damage, as evidenced by the preservation of the lung architecture and a reduction in pulmonary inflammatory infiltrates. RD3-0028 aerosol is not toxic for mice at the therapeutic dose[2]. The plasma concentration of RD3-0028 is maintained at the same level from 5 min to 1 h, and decreases with a half-life of 2.2 h for 1±8 h. The excretion of radioactivity in the urine and faeces at 24 h after aerosol treatment is 89.3 and 4.5%, respectively, indicating that almost all the radioactivity is rapidly excreted in the urine. The excretion of total radioactivity is 98.9% within 168 h[3].