Data Sheet (Cat.No.T211663)

TargetMol

Jun6504

Chemical Properties

CAS No. :

Formula:

Molecular Weight:

Storage: Powder: -20°C for 3 years | In solvent: -80°C for 1 year
Actual storage temperature shall be subject to the COA.

Biological Description

Description	Jun6504 is an inhibitor of enterovirus (enterovirus) 2C protein. It exhibits potent broad-spectrum antiviral activity against various strains of EV-D68 (EC50= 250 nM), EV-A71 (EC50= 502.4 nM), and CVB3 (EC50= 1049 nM). In a neonatal mouse model infected with EV-D68, Jun6504 improves paralysis scores and promotes weight gain. It reduces viral titers in the spinal cord and infected quadriceps muscle. Jun6504 is useful for researching antivirals against EV-D68.
Targets(IC50)	Virus Protease
In vitro	Jun6504 exhibits antiviral activity in RD cells against EV-D68, EV-A71, and CVB3 with EC50 values of 250 nM, 502.4 nM, and 1049 nM, respectively, when applied at concentrations ranging from 1 to 10000 nM. At 60 hours exposure in RD cells, it demonstrates activity against five EVD68 strains (US/MO114-18947, USMO114-18949, USIL/14-18952, US/L14-18956, USKY114-18953) with EC50 values between 0.25 and 0.47 μM. Jun6504, at concentrations from 0.01 to 10 μM for three days, shows dose-dependent inhibition in CPE assays against CVA16, CVA6, poliovirus type 1, and CVB3 with EC50 values of 0.24-0.57 μM and inhibits plaque formation of EV-A71 and EV-D68 in RD cells with EC50 values of 0.22 μM and 0.13 μM, respectively. It also causes a dose-dependent increase in the 2C protein melting temperature (Tm) of EV-A71, EV-D68, and CVB3 at concentrations from 1 to 1000 μM. Jun6504 impairs EV-D68 replication by blocking an intermediate stage of the viral life cycle, with effective inhibition when added before infection or up to 3 hours post-infection (hpi), while its efficacy diminishes at 5 hpi and 7 hpi. At concentrations between 12.8 and 100 μM in RD cells, Jun6504 has EC50 values of 0.80 μM, 3.38 μM, and 15.45 μM for viruses P3, P6, and P9, respectively, and shows no antiviral activity against P7 and P10 (EC50 >30 μM). The compound exhibits the weakest inhibitory activity against r2C-I112V/D183V/D323G (EC50 = 3.77 μM) and lacks antiviral activity against the EV-D68 2C mutants (F190L, D183V/F190L, D183V/F190L/D323G).
In vivo	In a neonatal mouse model infected with EV-D68, Jun6504 (50 mg/kg, administered via intraperitoneal injection once daily for 13-14 days) enhances paralysis scores and supports weight gain.

Tel:781-999-4286 E_mail:info@targetmol.com Address:34 Washington Street,Wellesley Hills,MA 02481