Stampidine

Description
Stampidine is a nucleoside reverse transcriptase inhibitor (NRTI) with potent and broad-spectrum anti-HIV activity. Stampidine inhibits the laboratory HIV-1 strain HTLV-IIIB (B-envelope subtype) and primary clinical isolates with IC50s of 1 nM and 2 nM, respectively. Stampidine also inhibits NRTI-resistant primary clinical isolates and NNRTI-resistant clinical isolates with IC50s of 8.7 nM and 11.2 nM, respectively[1].

IC50 & Target
IC50: 1 nM (HTLV-IIIB), 2 nM (primary clinical isolates), 8.7 nM (NRTI-resistant primary clinical isolates), 11.2 nM (NRTI-resistant primary clinical isolates)[1]

In Vitro
Stampidine (7.8-1,000 μM; 24 hours) is not cytotoxic to genital tract epithelial cells[2]. Stampidine has no effect on sperm motility in cervical mucus[2]. Stampidine has no effect on sperm motility and kinematics[2].

In Vivo
Stampidine (50-100 mg/kg; p.o.) exhibits potent antiretroviral activity in chronically feline immunodeficiency virus (FIV)-infected cats[3]. Stampidine (100 mg/kg; p.o.) shows the average plasma Cmax, AUC, half-life (t1/2), and mean residence time (MRT) values of 15.4 μM, 23.1 μM•h, 108.6 min and 119.4 min, respectively, in dogs[4]. Stampidine does not cause anemia, thrombocytopenia, neutropenia, or lymphopenia suggestive of hematologic toxicity, elevations of BUN or creatinine or electrolyte disturbances suggestive of renal toxicity or metabolic abnormalities, elevations of ALT, AST, Alk in adult beagle dogs[4].
**Administration:** Oral administration

**Result:** The estimated average plasma $C_{\text{max}}$ and AUC values were $15.4 \pm 6.1 \, \mu M$ and $23.1 \pm 5.4 \, \mu M\cdot h$, respectively. The average elimination half-life ($t_{1/2}$) and mean residence time (MRT) were $108.6 \pm 28.8$ and $119.4 \pm 24.6$ min, respectively.

**REFERENCES**


