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

# Tenofovir (maleate)

## Catalog No: tcsc1875

### Available Sizes

**Size:** 5mg

**Size:** 10mg

**Size:** 50mg

### Specifications

**CAS No:**
1236287-04-9

**Formula:**
$C_{13}H_{18}N_5O_8P$

**Pathway:**
Anti-infection;Anti-infection

**Target:**
Reverse Transcriptase;HIV

**Purity / Grade:**
>98%

**Solubility:**
10 mM in DMSO

**Alternative Names:**
GS 1278 maleate;PMPA maleate;TDF maleate

**Observed Molecular Weight:**
403.28

## Product Description

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Tenofovir Disoproxil Fumarate is a **nucleotide reverse transcriptase inhibitor** to treat HIV and chronic Hepatitis B.

***In Vitro:*** Tenofovir shows cytotoxic effects on cell viability in HK-2 cells, with $IC_{50}$ values of 9.21 and 2.77 μM at 48 and 72 h in MTT assay, respectively. Tenofovir diminishes ATP levels in HK-2 cells. Tenofovir (3.0 to 28.8 μM) increases oxidative stress and protein carbonylation in HK-2 cells. Furthermore, Tenofovir induces apoptosis in HK-2 cells, and that apoptosis is induced via mitochondrial damage[1]. Tenofovir and M48U1 formulated in 0.25% HEC each inhibits the replication of both R5-tropic HIV-$1_{BaL}$ and X4-tropic HIV-$1_{IIIb}$ in activated PBMCs, and inhibits several laboratory strains and patient-derived HIV-1 isolates. The combined formulation of M48U1 and tenofovir in 0.25% HEC exhibits synergistic antiretroviral activity against infection with R5-tropic HIV-$1_{BaL}$, and is not toxic to PBMCs[2].

***In Vivo:*** Tenofovir Disoproxil Fumarate (20, 50, 140, or 300 mg/kg) administered to BLT mice, shows dose dependent activity during vaginal HIV challenge in BLT humanized mice. Tenofovir Disoproxil Fumarate (50, 140, 300 mg/kg) significantly reduces HIV transmission in BLT mice[3]. Tenofovir Disoproxil Fumarate (0.5, 1.5, or 5.0 mg/kg/day, p.o.) induces a dose-dependent decline in serum viremia in woodchucks chronically infected with WHV. Tenofovir Disoproxil Fumarate administration is safe and effective in the woodchuck model of chronic HBV infection[4].