

Product Name:	Tenofovir Alafenamide
Product Number:	T128
CAS Number:	379270-37-8
Molecular Formula:	$C_{21}H_{29}N_6O_5P$
Molecular Weight:	476.47
Form:	Powder
Appearance:	White or off-white powder
Solubility:	freely soluble in methanol, soluble in ethanol and DMSO, sparingly soluble in water.
Source:	Synthetic
Storage Conditions:	-20C
Description:	Tenofovir alafenamide is an antiretroviral developed by Gilead and the anti-HIV activity was reported in 1993. It is an investigational precursor to Tenofovir, a nucleotide reverse transcriptase inhibitor. Tenofovir alafenamide is more efficient at delivering Tenofovir to target cells.
Mechanism of Action:	Tenofovir alafenamide is a nucleotide analog reverse transcriptase inhibitor that terminates DNA transcription.
Spectrum:	antiretroviral
References:	Balzarini J et al (1993) Differential antiherpesvirus and antiretrovirus effects of the (S) and (R) enantiomers of acyclic nucleoside phosphonates: potent and selective in vitro and in vivo antiretrovirus activities of (R)-9-(2-phosphonomethoxypropyl)-2,6-diaminopurine Antimicrob. Agents Chemother. 37:332-338 PMID 8452366 Lee WA (2005) Selective intracellular activation of a novel prodrug of the human immunodeficiency virus reverse transcriptase inhibitor tenofovir leads to preferential distribution and accumulation in lymphatic tissue. Antimicrob Agents Chemother. 49(5):1898-1906 PMID 15855512 Ray AS, Fordyce MW, and Hitchcock MJM (2016) Tenofovir alafenamide: A novel prodrug of tenofovir for the treatment of human immunodeficiency virus. Antiviral Res. 125:63-70 Stray KM et al (2017) Tenofovir alafenamide (TAF) does not deplete mitochondrial DNA in human T-cell lines at intracellular concentrations exceeding clinically relevant drug exposures. Antiviral Res. 140:116-120