

[Open Peer Review on Qeios](#)

# Emtricitabine/Rilpivirine/Tenofovir Disoproxil Fumarate

National Cancer Institute

## Source

National Cancer Institute. *Emtricitabine/Rilpivirine/Tenofovir Disoproxil Fumarate*. NCI Thesaurus. Code C157408.

A fixed combination of emtricitabine, a nucleoside reverse transcriptase (RT) inhibitor (NRTI) analog of cytidine; rilpivirine, a non-nucleoside RT inhibitor (NNRTI); and tenofovir disoproxil fumarate, an NRTI analog of adenosine monophosphate, that is used to treat human immunodeficiency virus (HIV) infection. Upon oral administration, rilpivirine binds to HIV RT, thereby blocking RNA and DNA-dependent DNA polymerase activities including viral replication. Emtricitabine and tenofovir disoproxil fumarate inhibit the activity of HIV RT by competing with natural deoxyribonucleosides for incorporation into the growing viral DNA chain resulting in early chain termination. This interferes with the generation of DNA copies of viral RNA, which is necessary for the synthesis of new virions.