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Potent HIV Integrase Inhibitor (20150106, Dr. Zhengqiang Wang)

Technology No. 20150106

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Integrase Strand Transfer Inhibitor

A next generation HIV integrase strand transfer (INST) inhibitor selectively targets and potently inhibits HIV integrase. The drug features a distinct pharmacophore and shows great promise in reducing resistance. Biochemical testing and molecular modeling strongly corroborate the inhibition of INST as the antiviral mechanism of action. Furthermore, selected antiviral analogues also potently inhibited reverse transcriptase (RT) associated RNase H, implying potential dual target inhibition.

May Target Drug-Resistant HIV

HIV integrase is a validated target that catalyzes the integration of viral genetic material into a host genome. Current integrase inhibitors primarily interfere with the strand transfer process, but this compound has a significantly different structure than known HIV inhibitors. In fact, this inhibitor may even effectively target drug-resistant strains of HIV.

BENEFITS AND FEATURES:

- Selectively targets and potently inhibits HIV integrase
- Dual target inhibition: also inhibits reverse transcriptase (RT) associated RNase H
- Shows promise in reducing drug resistance
- Distinct 3-hydroxypyrimidine-2,4-dione core

APPLICATIONS:

- HIV integrase inhibitor combined with other antiretroviral drugs
- Empower other non-integrase inhibitor lead candidates
- Potently inhibit reverse transcriptase (RT) associated RNase H as well

Phase of Development In Vitro assessment; In Vivo/animal studies

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