Emtricitabine (FTC)

Catalog No.C07991 Batch:C0799103

Product Datasheet

Technical Data

Formula	$C_8H_{10}FN_3O_3S$		
Molecular Weight	247.25	**CAS No.**	143491-57-0
Solubility (25°C)*	In vitro	DMSO	49 mg/mL (198.17 mM)
		Water	49 mg/mL (198.17 mM)
		Ethanol	34 mg/mL (137.51 mM)

* <1 mg/ml means slightly soluble or insoluble.
* Please note that Capsid Bio tests the solubility of all compounds in-house, and the actual solubility may differ slightly from published values. This is normal and is due to slight batch-to-batch variations.
* Room temperature shipping (Stability testing shows this product can be shipped at 2-8°C for storage purposes.)

Preparing Stock Solutions

Concentration \ Volume / Mass	1 mg	5 mg	10 mg
1 mM	4.0445 mL	20.2224 mL	40.4449 mL
5 mM	0.8089 mL	4.0445 mL	8.0890 mL
10 mM	0.4044 mL	2.0222 mL	4.0445 mL
50 mM	0.0809 mL	0.4044 mL	0.8089 mL

Biological Activity

Description	Emtricitabine (FTC) is a new nucleoside agent that has activity against both human immunodeficiency virus (HIV) and hepatitis B virus. It is a **reverse transcriptase** inhibitor, and its intracellular half-life is 39 h.
Targets	Reverse transcriptase [1]
In vitro	Emtricitabine (FTC) moderately reduces hepatocyte proliferation independent of effects on mtDNA in HepG2 human hepatoma cells, and when combined with tenofovir, slightly reduces cell proliferation without affecting mitochondrial parameters.[1] It efficiently converts to its active metabolites in PBMCs and CEM cells, and displays additive to synergistic activity against HIV replication in PBMCs when combined with tenofovir, resulting in strongly synergistic anti-HIV activity in MT-2 cells against both wild-type and mutant virus.[2] This compound demonstrates antiviral activity against laboratory adapted strains of HIV-1 and HIV-2 in various cell systems, and also exhibits antiviral activity in cell culture against feline and simian immuno-deficiency viruses (SIVs). It consistently shows up to 10-fold greater activity than lamivudine against all viruses tested in all T-cell lines, and generally demonstrates greater potency in vitro in human PBMCs than in MT-4 lines.[3] Additionally, it exhibits anti-HBV activity in vitro (EC50, 0.01–0.04 μM) that is comparable to the anti-HBV activity of 3TC.[4] It is approximately fourfold more active than 3TC in assays in the transformed T-cell line MT-4 infected with HIV-(1IIIB), whereas zidovudine is more active than this compound. Emtricitabine, lamivudine, and zidovudine are equally active against a panel of eight primary HIV-1 isolates from antiretroviral-naive subjects in PBMCs.[5]

References

https://pubmed.ncbi.nlm.nih.gov/18018766/ https://pubmed.ncbi.nlm.nih.gov/16759055/ https://pubmed.ncbi.nlm.nih.gov/11491420/

+ Expand

RETURN POLICY

Capsid Bio's Unconditional Return Policy ensures a smooth online shopping experience for our customers. If you are in any way unsatisfied with your purchase, you may return any item(s) within 7 days of receiving it. In the event of product quality issues, either protocol related or product related problems, you may return any item(s) within 365 days from the original purchase date. Please follow the instructions below when returning products.

SHIPPING & STORAGE

Capsid Bio products are transported at room temperature. If you receive the product at room temperature, please rest assured, the Capsid Bio Quality Inspection Department has conducted experiments to verify that the normal temperature placement of one month will not affect the biological activity of powder products. After collecting, please store the product according to the requirements described in the datasheet. Most Capsid Bio products are stable under the recommended conditions.

NOT FOR HUMAN, VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

EU Headquarters
Gajeva ulica 28, HR-10000 Zagreb, Croatia

US Headquarters
12222 Merit Dr STE 130 Dallas, Texas, 75251

UK Headquarters
121 ABILITY HOUSE, BROOKER ROAD, EN9 1JH, ESSEX

Orders: Sales@capsidbio.com
Enquiries: info@capsidbio.com
www.capsidbio.com