ALPHA DIAGNOSTIC INTERNATIONAL

Product Data Sheet

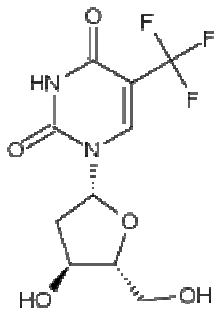
Life Technologies™ Your Molecular & Cell Technology Partner

□ Cat # ABT-390-001	Trifluridine (>98% pure)	Size: 100 mg
□ Cat # ABT-390-005	Trifluridine (>98% pure)	Size: 500 mg

General Information

Trifluridine (trade name: Viroptic) is an anti-herpesvirus antiviral drug, used primarily on the eye. an antiviral drug for topical treatment of epithelial keratitis caused by herpes simplex virus. The chemical name of trifluridine is α,α,α-trifluorothymidine.

It is a nucleoside analogue, a modified form of deoxyuridine, similar enough to be incorporated into viral DNA replication, but the -CF3 group added to the uracil component blocks base pairing. It is a component of the experimental anti-cancer drug TAS-102. Trifluridine is a fluorinated pyrimidine nucleoside with in vitro and in vivo activity against herpes simplex virus, types 1 and 2 and vaccinia virus. Some strains of adenovirus are also inhibited in vitro. The mechanism of action of trifluridine has not been fully determined, but appears to involve the inhibition of viral replication. Trifluridine does this by incorporating into viral DNA during replication, which leads to the formation of defective proteins and an increased mutation rate. This drug also reversibly inhibits thymidylate synthetase, an enzyme that is necessary for DNA synthesis.



Molecular Formula:
$C_{10}H_{11}F_3N_2O_5$
Molecular Weight:
296.20 g/mol

Trifluridine is also effective in the treatment of epithelial keratitis that has not responded clinically to the topical administration of idoxuridine or when ocular toxicity or hypersensitivity to idoxuridine has occurred. In a smaller number of patients found to be resistant to topical vidarabine, trifluridine was also effective. A Cochrane Systematic Review showed that trifluridine was a more effective treatment than idoxuridine or vidarabine, significantly increasing the relative number of successfully healed eyes in 14 days.

The clinical efficacy of trifluridine in the treatment of stromal keratitis and uveitis due to herpes simplex virus or ophthalmic infections caused by vaccinia virus and adenovirus has not been established by well-controlled clinical trials. Trifluridine has not been shown to be effective in the prophylaxis of herpes simplex virus keratoconjunctivitis and epithelial keratitis by well-controlled clinical trials. Trifluridine is not effective against bacterial, fungal or chlamydial infections of the cornea or nonviral trophic lesions.

Synonyms: Triflurothymidine, Triflurothymine deoxyriboside,

CAS no. 70-00-8

Analysis Test	Specification	Results
Appearance	White to off-white crystalline powder	white crystalline powder
Purity (HPLC)	Min 98%	>98%
Identity (IR)	Confirms to structure	conforms
Melting point	Reported	186-188 ºC
Conclusion	QC Passed	

Related items:

ABT-010-01	Amikacin, Sulfate (>98% pure), antibacterial
ABT-020-05	Amoxicillin (>98% pure)
ABT-030-25	Ampicillin Trihydrate, Sodium (>98% pure)
ABT-040-02	Azithromycin (>98% pure)
ABT-050-01	Benzylpenicillin, potassium (>98% pure)
ABT-060-10	Penicillin G, Sodium (>98% pure)
ABT-070-10	Ceftazidime (>98% pure)
ABT-080-002	Ceftiofur, Sodium (>98% pure)
ABT-090-010	Chloramphenicol (>98% pure)
ABT-100-10	Ciprofloxacin, Monohydrochloride (>98% pure)
ABT-110-001	Colistin, sulfate (>98% pure)
ABT-120-25	Doxycycline, Hydrochloride (>98% pure)
ABT-130-010	Erythromycin (>98% pure)

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