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DATASHEET

Azidothymidine

Product overview

Name	Azidothymidine
Cat No	HB4602
Alternative names	AZT, ZDV
Purity	>98%
Description	Selective reverse transcriptase inhibitor with anti-HIV activity. Decreases CRISPR-mediated homology directed repair (HDR) and enhances gene knockout efficiency.

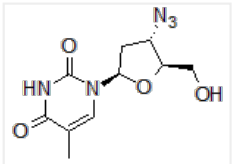
Biological Data

Biological description	Selective reverse transcriptase inhibitor which exhibits 100-fold selectivity for HIV reverse transcriptase compared to DNA polymerase α. Blocks HIV replication and exhibits anti-HIV activity. Orally bioavailable and brain penetrant. Also decreases CRISPR-mediated homology directed repair (HDR) efficiency and enhances gene knockout efficiency.

Solubility & Handling

Solubility overview	Soluble in water (50 mM) and in DMSO (100 mM)
Storage instructions	Room temperature
Storage of solutions	Prepare and use solutions on the same day if possible. Store solutions at -20°C for up to one month if storage is required. Equilibrate to RT and ensure the solution is precipitate free before use.
Shipping Conditions	Stable for ambient temperature shipping. Follow storage instructions on receipt.
Important	This product is for RESEARCH USE ONLY and is not intended for therapeutic or diagnostic use. Not for human or veterinary use.

Chemical Data

Chemical name	3'-Azido-3'-deoxythymidine
Molecular Weight	267.2
Chemical structure	
Molecular Formula	$C_{10}H_{13}N_5O_4$
CAS Number	30516-87-1
PubChem identifier	5726
SMILES	CC1=CN(C(=O)NC1=O)C2CC(C(O2)CO)N=[N+]=[N-]
InChi	InChI=1S/C10H13N5O4/c1-5-3-15(10(18)12-9(5)17)8-2-6(13-14-11)7(4-16)19-8/h3,6-8,16H,2,4H2,1H3,(H,12,17,18)
InChiKey	HBOMLICNUCNMMY-UHFFFAOYSA-N
MDL number	MFCD00006536
Appearance	White solid

References

3'-Azido-3'-deoxythymidine (BW A509U): an antiviral agent that inhibits the infectivity and cytopathic effect of human T-lymphotropic virus type III/lymphadenopathy-associated virus in vitro.

Mitsuya et al (1985) Proc Natl Acad Sci U S A 82(20)
PubMedID 2413459

The development of antiretroviral therapy and its impact on the HIV-1/AIDS pandemic.

Broder (2010) Antiviral Res 85(1)
PubMedID 20018391

Small molecules enhance CRISPR genome editing in pluripotent stem cells.

Yu et al (2015) Cell Stem Cell 16(2)
PubMedID 25658371