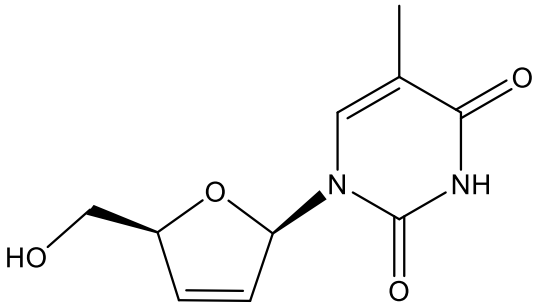
Catalog # 10-1266

Stavudine

CAS# 3056-17-5

2',3'-Didehydro-3'-deoxythymidine; BMY 27857; d4T

Lot # X109423



Stavudine is a thymidine derivative that acts as an HIV nucleoside reverse transcriptase inhibitor (NRTI) (EC_{50} = 8.8 nM for HIV-1 replication in human PBMCs).[1,2] Down-modulates P2X7-mediated NLRP3 inflammasome activation independent of reverse transcriptase inhibition.[3] Reduces production of IL-18 and caspase-1 and stimulates Aβ-induced autophagy in macrophages.[4]

1) T-S Lin *et al.* (1987*), Potent and selective in vitro activity of 3'-deoxythymidin-2'-ene (3'-deoxy-2',3'-didehydrothymidine) against human immunodeficiency virus;* Biochem. Pharmacol., **36** 2713
2) Baba *et al.* (1987), *Both 2',3'-dideoxythymidine and its 2',3'-unsaturated derivative (2',3'-dideoxythymidinene) are potent and selective inhibitors of human immunodeficiency virus replication in vitro;* Biochem. Biophys. Res. Commun., **142** 128
3) Fowler *et al*. (2014), *Nucleoside reverse transcriptase inhibitors possess intrinsic anti-inflammatory activity;* Science, **346** 1000
4) La Rosa *et al.* (2019), *Stavudine Reduces NLRP3 Inflammasome Activation and Modulates Amyloid-ß Autophagy;* J. Alzheimer's Dis., **72** 401

PHYSICAL DATA

Molecular Weight:	224.22
Molecular Formula:	$C_{10}H_{12}N_2O_4$
Purity:	>98% by HPLC
	NMR: (Conforms)
Solubility:	DMSO (20 mg/ml), or water (20 mg/ml)
Physical Description:	White solid
Storage and Stability:	Store as supplied at -20°C for up to 2 years from the date of purchase. Solutions in DMSO or water may be stored at -20°C for up to 1 month.

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