# **PRODUCT** INFORMATION



## Kazusamycin B

Item No. 28119

CAS Registry No.:	107140-30-7	
Formal Name:	(2E,10E,12E,16Z,18E)-19-(3,6-dihydro-3-	
	methyl-6-oxo-2H-pyran-2-yl)-6-hydroxy-9-	
	(hydroxymethyl)-3,5,7,11,15,17-hexamethyl-8-	
	oxo-2,10,12,16,18-nonadecapentaenoic acid	0 
Synonyms:	CL 1957E, Hydroxyleptomycin A, PD 124895	ОН
MF:	$C_{32}H_{46}O_7$	
FW:	542.7	
Purity:	≥95%	Г / Он
Supplied as:	A film	
Storage:	-20°C	
Stability:	≥4 years	
Item Origin:	Bacterium/Streptomyces sp.	
Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.		

#### Laboratory Procedures

Kazusamycin B is supplied as a film. A stock solution may be made by dissolving the kazusamycin B in the solvent of choice. Kazusamycin B is soluble in organic solvents such as ethanol and methanol, which should be purged with an inert gas.

Kazusamycin B is sparingly soluble in aqueous solutions. To enhance aqueous solubility, dilute the organic solvent solution into aqueous buffers or isotonic saline. If performing biological experiments, ensure the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. We do not recommend storing the aqueous solution for more than one day.

#### Description

Kazusamycin B is a bacterial metabolite originally isolated from Streptomyces.<sup>1</sup> It has antifungal activity against S. pombe and R. javanicus (MICs = 0.05 and 2.13 µg/ml, respectively) but is inactive against Gram-positive and Gram-negative bacteria (MICs = >100  $\mu$ g/ml). Kazusamycin B (5 ng/ml) halts the cell cycle at the G<sub>1</sub> phase and induces nuclear condensation in L1210 cells, as well as inhibits nuclear-to-cytosolic transport of the HIV-1 regulatory protein Rev in HeLa cells expressing Rev (IC<sub>50</sub> = 6.3 nM).<sup>2,3</sup> It is cytotoxic to L1210 and HCT-8 cells with IC50 values of 1.8 and 1.6 ng/ml, respectively, and reduces tumor growth in a variety of murine tumor and mouse xenograft models.<sup>4</sup>

#### References

- 1. Funaishi, K., Kawamura, K., Sugiura, Y., et al. Kazusamycin B, a novel antitumor antibiotic. J. Antibiot. (Tokyo) 40(6), 778-785 (1987).
- 2. Takamiya, K., Yoshida, E., Takahashi, T., et al. The effect of kazusamycin B on the cell cycle and morphology of cultured L1210 cells. J. Antibiot. (Tokyo) 41(12), 1854-1861 (1988).
- 3. Wolff, B., Sanglier, J.J., and Wang, Y. Leptomycin B is an inhibitor of nuclear export: Inhibition of nucleo-cytoplasmic translocation of the human immunodeficiency virus type 1 (HIV-1) Rev protein and Rev-dependent mRNA. Chem. Biol. 4(2), 139-147 (1997).
- 4. Yoshida, E., Komiyama, K., Naito, K., et al. Antitumor effect of kazusamycin B on experimental tumors. J. Antibiot. (Tokyo) 40(11), 1596-1604 (1987).

WARNING THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

#### SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

#### WARRANTY AND LIMITATION OF REMEDY

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1180 EAST ELLSWORTH RD ANN ARBOR, MI 48108 · USA PHONE: [800] 364-9897 [734] 971-3335 FAX: [734] 971-3640 CUSTSERV@CAYMANCHEM.COM WWW.CAYMANCHEM.COM