



LKT Laboratories, Inc.

9-cis-Retinoic Acid

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Product Information

Product ID R1777

CAS No. 5300-03-8

Chemical Name (2E,4E,6Z,8E)-3,7-Dimethyl-9-(2,6,6-trimethylcyclohex-1-enyl) nona-2,4,6,8-tetraenoic Acid

Synonym 9-cis-Tretinoin, Panrexin, Alitretinoin

Formula C₂₀H₂₈O₂

Formula Wt. 300.44

Melting Point 189-191 °C

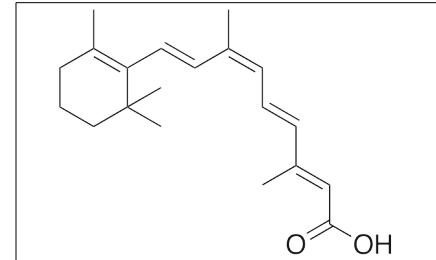
Purity ≥98%

Solubility Soluble in DMSO and ethanol.

Store Temp -80 °C

Ship Temp Blue Ice

Description 9-cis Retinoic acid is an agonist at retinoic acid receptors (RARs) and retinoic X receptors (RXRs); it exhibits cardioprotective, neuroprotective, pro-angiogenic, anti-inflammatory, and anticancer chemotherapeutic activities. This compound is a derivative of vitamin A. 9-cis Retinoic acid prevents hypoxia-induced decreases in the mitochondrial membrane potential and the induction of apoptosis and cell death in cardiomyocytes. In vivo, this compound prevents methamphetamine-induced changes in locomotor activity and tyrosine hydroxylase expression and increase levels of bone morphogenetic protein 7 (BMP7). Additionally, 9-cis retinoic acid decreases 6-OHDA-induced neuronal death in animal models of Parkinson's disease. In monocytes, 9-cis retinoic acid decreases LPS-stimulated expression of IL-6, TNF-α, CCL3, and CCL4. In cellular and animal models of adrenocortical cancer, this compound decreases cell viability and tumor growth. 9-cis Retinoic acid also inhibits adipogenesis. In lymphatic endothelial cells, 9-cis retinoic acid increases cell proliferation, migration, and tube formation.



Bulk quantities available upon request

Product ID	Size
R1777	1 mg
R1777	5 mg
R1777	25 mg
R1777	100 mg

References Shan PR, Xu WW, Huang ZQ, et al. Protective role of retinoid X receptor in H9c2 cardiomyocytes from hypoxia/reoxygenation injury in rats. *World J Emerg Med.* 2014;5(2):122-7. PMID: 25215161.

Reiner DJ, Yu SJ, Shen H, et al. 9-Cis retinoic acid protects against methamphetamine-induced neurotoxicity in nigrostriatal dopamine neurons. *Neurotox Res.* 2014 Apr;25(3):248-61. PMID: 23884514.

Szabó DR, Baghy K, Szabó PM, et al. Antitumoral effects of 9-cis retinoic acid in adrenocortical cancer. *Cell Mol Life Sci.* 2014 Mar;71(5):917-32. PMID: 23807211.

Sagara C, Takahashi K, Kagechika H, et al. Molecular mechanism of 9-cis-retinoic acid inhibition of adipogenesis in 3T3-L1 cells. *Biochem Biophys Res Commun.* 2013 Mar 29;433(1):102-7. PMID: 23485459.

Yin LH, Shen H, Diaz-Ruiz O, et al. Early post-treatment with 9-cis retinoic acid reduces neurodegeneration of dopaminergic neurons in a rat model of Parkinson's disease. *BMC Neurosci.* 2012 Oct 6;13:120. PMID: 23040108.

Choi I, Lee S, Kyoung Chung H, et al. 9-cis retinoic acid promotes lymphangiogenesis and enhances lymphatic vessel regeneration: therapeutic implications of 9-cis retinoic acid for secondary lymphedema. *Circulation.* 2012 Feb 21;125(7):872-82. PMID: 22275501.

Kolseth IB, Agren J, Sundvold-Gjerstad V, et al. 9-cis retinoic acid inhibits inflammatory responses of adherent monocytes and

Caution: This product is intended for laboratory and research use only. It is not for human or drug use.