



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** C<sub>20</sub>H<sub>28</sub>O<sub>2</sub>

**Formula Wt.** 300.44

**Melting Point** 189-191 °C

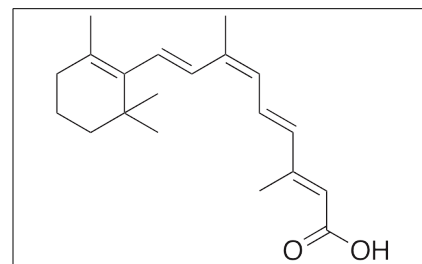
**Purity** ≥98%

**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. TEST!!!!!!



### Pricing and Availability

**Bulk quantities available upon request**

Product ID	Size	List Price
R1777	1 mg	\$49.70
R1777	5 mg	\$93.80
R1777	25 mg	\$275.60
R1777	100 mg	\$716.60

**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.

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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.