

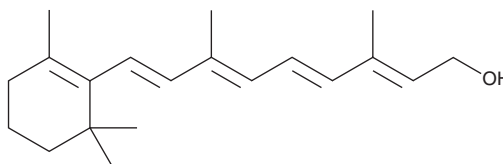
# PRODUCT INFORMATION



## Vitamin A

Item No. 20241

**CAS Registry No.:** 68-26-8  
**Formal Name:** (2E,4E,6E,8E)-3,7-dimethyl-9-(2,6,6-trimethylcyclohex-1-en-1-yl)nona-2,4,6,8-tetraen-1-ol  
**Synonyms:** all-*trans* Retinol, all-*trans* Vitamin A, NSC 122759, Vitamin A<sub>1</sub> Alcohol  
**MF:** C<sub>20</sub>H<sub>30</sub>O  
**FW:** 286.5  
**Purity:** ≥95%  
**Supplied as:** A crystalline solid  
**Storage:** -80°C  
**Stability:** ≥2 years  
**Special Conditions:** Light sensitive  
**Item Origin:** Synthetic



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

### Laboratory Procedures

Vitamin A is supplied as a crystalline solid. A stock solution may be made by dissolving the vitamin A in the solvent of choice, which should be purged with an inert gas. Vitamin A is soluble in organic solvents such as chloroform, ethanol, DMSO, and dimethyl formamide (DMF). The solubility of vitamin A in these solvents is approximately 10 mg/ml in chloroform and ethanol and approximately 30 mg/ml in DMSO and DMF.

### Description

Vitamin A, also known as all-*trans* retinol, is an intermediate in retinol metabolism in animals. It is metabolized to retinoic acid (Item No. 11017), a ligand for both the retinoic acid receptor (RAR) and the retinoid X receptor (RXR). RAR and RXR heterodimerize and act as ligand-dependent transcriptional regulators, with roles in development, reproduction, immunity, organogenesis, and cancer.<sup>1-3</sup>

### References

1. Duong, V. and Rochette-Egly, C. The molecular physiology of nuclear retinoic acid receptors. From health to disease. *Biochim. Biophys. Acta.* **1812(8)**, 1023-1031 (2011).
2. Rochette-Egly, C. and Germain, P. Dynamic and combinatorial control of gene expression by nuclear retinoic acid receptors (RARs). *Nucl. Recept. Signal.* **7**, 1-18 (2009).
3. Dollé, P. Developmental expression of retinoic acid receptors (RARs). *Nucl. Recept. Signal.* **7**, 1-13 (2009).

#### 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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