

## Retinoic acid Datasheet

4<sup>th</sup> Edition (Revised in July, 2016)

### [ Product Information ]

**Name:** Retinoic acid

**Catalog No.:** CFN90026

**Cas No.:** 302-79-4

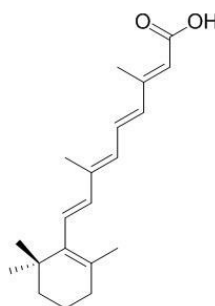
**Purity:** >=98%

**M.F:** C<sub>20</sub>H<sub>28</sub>O<sub>2</sub>

**M.W:** 300.44

**Physical Description:** Yellow powder

**Synonyms:** Trans-Retinoic acid; Vitamin A acid ;Trans Vitamin A acid.



### [ Intended Use ]

1. Reference standards;
2. Pharmacological research;
3. Synthetic precursor compounds;
4. Intermediates & Fine Chemicals;
5. Others.

### [ Source ]

From *lamb liver*.

### [ Biological Activity or Inhibitors ]

Vitamin A metabolite retinoic acid as a key regulator of TGF-beta-dependent immune

responses, capable of inhibiting the IL-6-driven induction of proinflammatory T(H)17 cells and promoting anti-inflammatory Treg cell differentiation.<sup>[1]</sup>

All-trans retinoic acid is an effective inducer for attaining complete remission in acute promyelocytic leukemia (APL).<sup>[2]</sup>

Retinoids can provide a therapeutic tool in the treatment of acute myeloid leukemia, a disease that has been looked upon as primarily involving a block in myeloid differentiation, and indicates that retinoids, in addition to their well-characterized involvement in epithelial cell differentiation, may also be involved in the differentiation of certain hematopoietic cells.<sup>[3]</sup>

All-trans retinoic acid is well known as a biologically active form of vitamin A and a teratogen, it can cause an anteroposterior transformation in the developing central nervous system.<sup>[4]</sup>

Retinoic acid has anti-inflammatory effects, it inhibits CD4(+) helper T (Th) 17 polarization and enhances FoxP3 expression through a Stat-3/Stat-5 independent signaling pathway, which provides a mechanism for the anti-inflammatory effects of retinoic acid.<sup>[5]</sup>

Retinoic acid can induce neuronal differentiation of a cloned human embryonal carcinoma cell line in vitro.<sup>[6]</sup>

## **[ Solvent ]**

Chloroform, Dichloromethane, Ethyl Acetate, DMSO, Acetone, etc.

## **[ HPLC Method ]<sup>[7]</sup>**

Mobile phase: n-Hexane: 2-Propanol: Acetic acid =200:0.7:0.135 ;

Flow rate: 0.9 ml/min;

Column temperature: 30 °C;

The wave length of determination: 350 nm.

## **[ Storage ]**

2-8°C, Protected from air and light, refrigerate or freeze.

## **[ References ]**

- [1] Mucida D, Park Y, Kim G, *et al. Science*, 2007, 317(5835):256-60.
- [2] Huang M E, Ye Y C, Chen S R, *et al. Blood*, 1988, 72(2):567-72.
- [3] Breitman T R, Selonick S E, Collins S J. *P. Natl. Acad. Sci.*, 1980, 77(5):2936-40.
- [4] Durston A J, Timmermans J P, Hage W J, *et al. Nature*, 1989, 340(6229):140-4.
- [5] Elias K M, Laurence A, Davidson T S, *et al. Blood*, 2008, 111(3):1013-20.
- [6] Andrews P W. *Dev. Biol.*, 1984, 103(2):285-93.
- [7] Meyer E, Lambert W E, De Leenheer A P. *Clin. Chem.*, 1994, 40(1):48-57.

## **[ Contact ]**

**Address:**

S5-3 Building, No. 111, Dongfeng Rd.,  
Wuhan Economic and Technological Development Zone,  
Wuhan, Hubei 430056,  
China

**Email:** [info@chemfaces.com](mailto:info@chemfaces.com)

**Tel:** +86-27-84237783

**Fax:** +86-27-84254680

**Web:** [www.chemfaces.com](http://www.chemfaces.com)

**Tech Support:** [service@chemfaces.com](mailto:service@chemfaces.com)