

Certificate of Analysis

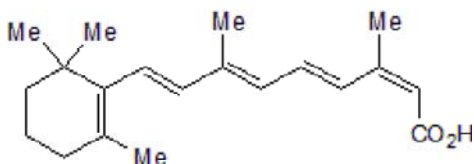
www.tocris.com

Product Name: Isotretinoin
CAS Number: 4759-48-2
IUPAC Name: 13-*cis*-Retinoic acid

Catalog No.: 5513
Batch No.: 2
EC Number: 225-296-0

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: C₂₀H₂₈O₂·¼H₂O
Batch Molecular Weight: 304.94
Physical Appearance: Orange solid
Solubility: DMSO to 100 mM
ethanol to 20 mM with gentle warming
Storage: Store at -20°C
Batch Molecular Structure:



2. ANALYTICAL DATA

HPLC: Shows 98.7% purity
¹H NMR: Consistent with structure
Mass Spectrum: Consistent with structure
Microanalysis:

	Carbon Hydrogen Nitrogen		
Theoretical	78.78	9.42	
Found	78.67	9.3	

Caution - Not Fully Tested • Research Use Only • Not For Human or Veterinary Use

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Product Information

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Product Name: Isotretinoin

CAS Number: 4759-48-2

IUPAC Name: 13-*cis*-Retinoic acid

Catalog No.: 5513

Batch No.: 2

EC Number: 225-296-0

Description:

Endogenous agonist for retinoic acid receptors. Promotes neurite outgrowth, cell differentiation and inhibits proliferation in a neuroblastoma cell line. Also increases protein expression levels of MYCN and retinoic acid receptor- β . Anti-inflammatory.

Physical and Chemical Properties:

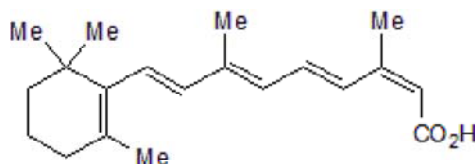
Batch Molecular Formula: C₂₀H₂₈O₂· $\frac{1}{4}$ H₂O

Batch Molecular Weight: 304.94

Physical Appearance: Orange solid

Minimum Purity: >99%

Batch Molecular Structure:



Storage: Store at -20°C. This product is packaged under an inert atmosphere.

CAUTION - This product is light sensitive and we recommend that the solid material and any solutions obtained are protected from exposure to light.

Solubility & Usage Info:

DMSO to 100 mM

ethanol to 20 mM with gentle warming

Stability and Solubility Advice:

Some solutions can be difficult to obtain and can be encouraged by rapid stirring, sonication or gentle warming (in a 45-60°C water bath).

Information concerning product stability, particularly in solution, has rarely been reported and in most cases we can only offer a general guide. Our standard recommendations are:

SOLIDS: Provided storage is as stated on the product label and the vial is kept tightly sealed, the product can be stored for up to 6 months from date of receipt.

SOLUTIONS: We recommend that stock solutions, once prepared, are stored aliquoted in tightly sealed vials at -20°C or below and used within 1 month. Wherever possible solutions should be made up and used on the same day.

References:

Sonawane *et al* (2014) Metabolic characteristics of 13-*cis*-retinoic acid (isotretinoin) and anti-tumour activity of the 13-*cis*-retinoic acid metabolite 4-oxo-13-*cis*-retinoic acid in neuroblastoma. *Br.J.Pharmacol.* **171** 5330. PMID: 25039756.

Diamandis *et al* (2007) Chemical genetics reveals a complex functional ground state of neural stem cells. *Nat.Chem.Biol.* **3** 268. PMID: 17417631.

Blaner *et al* (2001) Cellular metabolism and actions of 13-*cis*-retinoic acid. *J.Am.Acad.Dermatol.* **45** S129. PMID: 11606944.

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