

## Certificate of Analysis

[www.tocris.com](http://www.tocris.com)

**Product Name:** BNTX maleate

**Catalog No.:** 0899

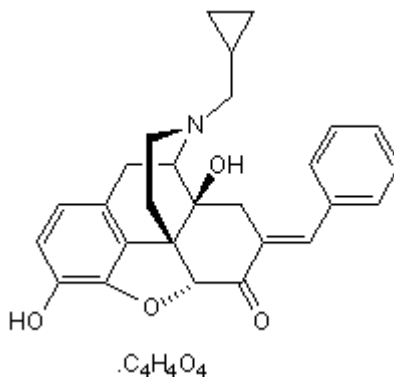
**Batch No.:** 5

**CAS Number:** 864461-31-4

**IUPAC Name:** 7-Benzylidenenaltrexone maleate

### 1. PHYSICAL AND CHEMICAL PROPERTIES

**Batch Molecular Formula:**  $C_{27}H_{27}NO_4 \cdot C_4H_4O_4 \cdot 1\frac{3}{4}H_2O$   
**Batch Molecular Weight:** 577.11  
**Physical Appearance:** Yellow solid  
**Solubility:** DMSO to 100 mM  
 water to 10 mM with gentle warming  
**Storage:** Desiccate at -20°C  
**Batch Molecular Structure:**



### 2. ANALYTICAL DATA

**TLC:**  $R_f = 0.3$  (Ethyl acetate:Petroleum ether [1:1])  
**HPLC:** Shows >99.4% purity  
<sup>1</sup>H NMR: Consistent with structure  
 Mass Spectrum: Consistent with structure  
**Microanalysis:**

	Carbon	Hydrogen	Nitrogen
Theoretical	64.52	6.03	2.43
Found	64.7	5.8	2.63

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

## Product Information

[www.tocris.com](http://www.tocris.com)

**Product Name:** BNTX maleate

**Catalog No.:** 0899

**Batch No.:** 5

**CAS Number:** 864461-31-4

**IUPAC Name:** 7-Benzylidenenaltrexone maleate

### Description:

Standard selective  $\delta_1$  opioid receptor antagonist. Also inhibits neurogenic ion transport mediated by a putative novel opioid receptor in porcine ileal mucosa.

### Physical and Chemical Properties:

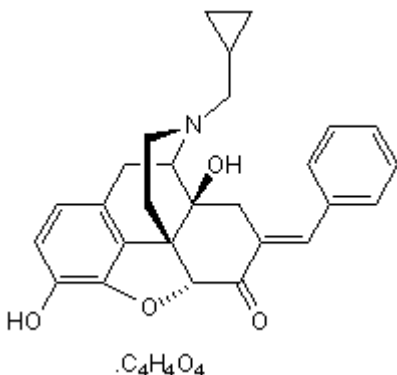
Batch Molecular Formula:  $C_{27}H_{27}NO_4 \cdot C_4H_4O_4 \cdot 1\frac{3}{4}H_2O$

Batch Molecular Weight: 577.11

Physical Appearance: Yellow solid

**Minimum Purity:** >99%

### Batch Molecular Structure:



**Storage:** Desiccate at  $-20^\circ\text{C}$

### Solubility & Usage Info:

DMSO to 100 mM

water to 10 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  $45-60^\circ\text{C}$  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  $-20^\circ\text{C}$  or below and used within 1 month. Wherever possible solutions should be made up and used on the same day.

### References:

**Portoghese *et al*** (1992) A  $\delta_1$ -opioid receptor antagonist: 7-benzylidenenaltrexone. *Eur.J.Pharmacol.* **218** 195. PMID: 1327826.

**Hammond *et al*** (1995) Antinociception and  $\delta$ -1 opioid receptors in the rat spinal cord: studies with intrathecal 7-benzylidenenaltrexone. *J.Pharmacol.Exp.Ther.* **274** 1317. PMID: 7562504.

**Poonyachoti *et al*** (2001) Pharmacological evidence for a 7-benzylidenenaltrexone-preferring opioid receptor mediating the inhibitory actions of peptidic  $\delta$ - and  $\mu$ -opioid agonists on neurogenic ion transport in porcine ileal mucosa. *J.Pharmacol.Exp.Ther.* **297** 672. PMID: 11303057.

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

#### bio-techne.com

info@bio-techne.com

techsupport@bio-techne.com

#### North America

Tel: (800) 343 7475

#### China

info.cn@bio-techne.com

Tel: +86 (21) 52380373

#### Europe Middle East Africa

Tel: +44 (0)1235 529449

#### Rest of World

[www.tocris.com/distributors](http://www.tocris.com/distributors)

Tel: +1 612 379 2956