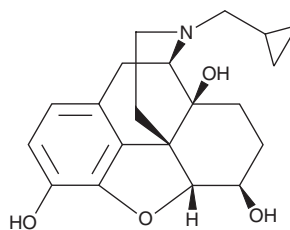


# PRODUCT INFORMATION



## 6 $\beta$ -Naltrexol Item No. 15896

**CAS Registry No.:** 49625-89-0  
**Formal Name:** (5 $\alpha$ ,6 $\beta$ )-17-(cyclopropylmethyl)-4,5-epoxy-morphinan-3,6,14-triol  
**Synonym:** 6 $\beta$ -hydroxy Naltrexone  
**MF:** C<sub>20</sub>H<sub>25</sub>NO<sub>4</sub>  
**FW:** 343.4  
**Purity:**  $\geq$ 98%  
**Supplied as:** A neat solid  
**Storage:** -20°C  
**Stability:**  $\geq$ 5 years



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

### Description

6 $\beta$ -Naltrexol (Item No. 15896) is an analytical reference material that is structurally categorized as an opioid. It is the major metabolite of naltrexone (Item Nos. ISO60192 | 15520).<sup>1</sup> Unlike naltrexone, which acts as a  $\mu$ -receptor antagonist or inverse agonist, 6 $\beta$ -naltrexol is a neutral opioid antagonist.<sup>2</sup> 6 $\beta$ -Naltrexol binds the  $\mu$ -opioid receptor more potently than naloxone (Item Nos. ISO60191 | 15594) or naltrexone ( $K_{i,s}$  = 94, 420, and 265 pM, respectively) but is  $\sim$ 100-fold less effective at blocking morphine-modulated pain *in vivo*, as assessed using the mouse hotplate test.<sup>3</sup> This product is intended for research and forensic applications.

This product is qualified as a Reference Material that has been manufactured and tested to ISO/IEC 17025 and ISO 17034 international standards for reference materials.

### References

1. Porter, S. J., Somogyi, A. A., and White, J. M. Kinetics and inhibition of the formation of 6 $\beta$ -naltrexol from naltrexone in human liver cytosol. *Br. J. Clin. Pharmacol.* **50(5)**, 465-471 (2000).
2. Wang, D., Raehal, K. M., Bilsky, E. J., *et al.* Inverse agonists and neutral antagonists at  $\mu$  opioid receptor (MOR): Possible role of basal receptor signaling in narcotic dependence. *J. Neurochem.* **77(6)**, 1590-1600 (2007).
3. Porter, S. J., Somogyi, A. A., and White, J. M. *In vivo* and *in vitro* potency studies of 6 $\beta$ -naltrexol, the major human metabolite of naltrexone. *Addict. Biol.* **7(2)**, 219-225 (2002).

#### 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

Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

Copyright Cayman Chemical Company, 08/27/2019

#### CAYMAN CHEMICAL

1180 EAST ELLSWORTH RD  
ANN ARBOR, MI 48108 · USA

**PHONE:** [800] 364-9897  
[734] 971-3335

**FAX:** [734] 971-3640

CUSTSERV@CAYMANCHEM.COM  
WWW.CAYMANCHEM.COM