

Caution: For Laboratory Use. A research reagent for research purposes only

human Opioid mu Receptor

Product No.: ES-542-M400UA

Lot No.: 2015389

Material Provided

Membranes: 1 x 400 units / 400 µL frozen aliquot

Product Information

Cellular Background: CHO-K1

GenBank Accession Number: L29301

Unit Size: 5 µg protein / unit

Storage Buffer: 50 mM Tris-HCL (pH 7.4), 0.5mM EDTA, 10mM MgCl₂, 10% sucrose.

Storage Conditions: Store at -80°C. **Freeze-thaw is not recommended** as it can affect product performance and homogeneity. In order to minimize negative impact of freeze-thawing, flash freeze in liquid nitrogen for 30 seconds prior to transferring to -80°C.

Stability: This product is stable for at least 3 years from reception if used and stored under recommended conditions.

Quality Control

B_{max} and K_d are determined using radioactive saturation binding assays (Figure 1). Protein concentration is determined using the BCA method ⁽¹⁾. Ratio-to-Reference (RTR) is determined by dividing the maximal signal of the current lot (B_{max} in fmoles) by the maximal signal of a pre-defined reference tested in parallel. RTR is an indicator of lot-to-lot consistency. *We certify that these results meet our quality release criteria.

Ratio-to-Reference (RTR): 1.19

Expression Level (B_{MAX}): 13.28 pmol/mg membrane protein.

K_D for [³H]-DAMGO : 0.45 nM

Protein Concentration: 5 µg/µL

(1) Smith, P.K., et al. (1985). *Anal. Biochem.* **150**, 76-85.

Recommended Assay Conditions

Assay Buffer: 50 mM Tris-HCl pH 7.4, 5 mM MgCl₂

Wash Buffer: 50 mM Tris-HCl pH 7.4

Binding Protocol: Binding assays are performed in 550 μ L total volume according to the following conditions:

1 - Membrane dilution: 0.05 mL of membranes + 24.95 mL assay buffer (1:500 dilution)

2 - Incubation: 25 μ L of incubation buffer or DAMGO (Sigma E7384) 50 μ M final for non specific binding (Saturation binding assay)

For competition binding assay: 25 μ L of reference compounds at decreasing concentrations (see figure 2)

25 μ L of radioligand at the appropriate concentration (see graph below)
500 μ L of diluted membranes

3 - Incubation time: 60 minutes at 27 $^{\circ}$ C

4 - Filtration: aspirate and wash 9 x 500 μ L with ice cold wash buffer over GF/B filter (presoaked in 0.5 % BSA).

Lot Specific Data

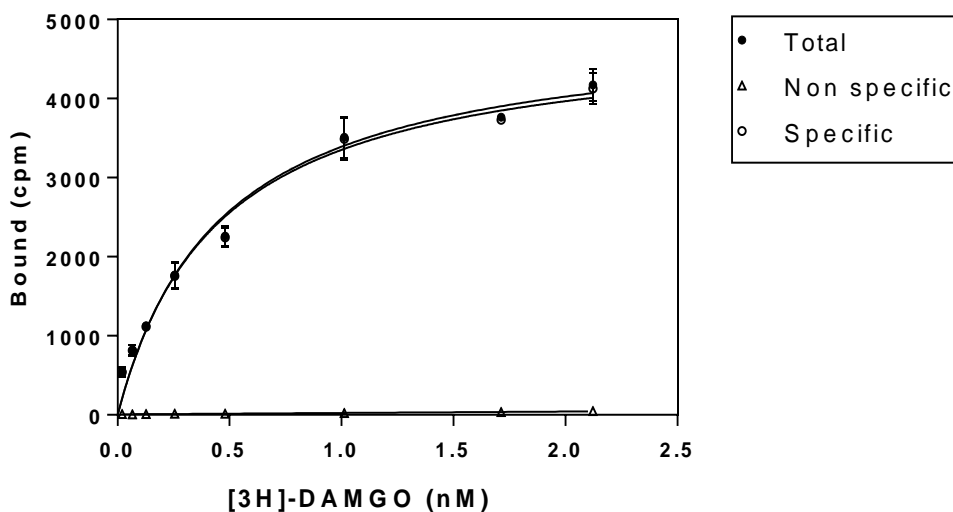


Figure 1: Saturation binding assay curve (filtration)

96-well saturation binding assay curve (5 μ g membranes/well, TopCount[®]) using [³H]-DAMGO (PerkinElmer NET902 Lot No.: 1986340)

Typical Product Data

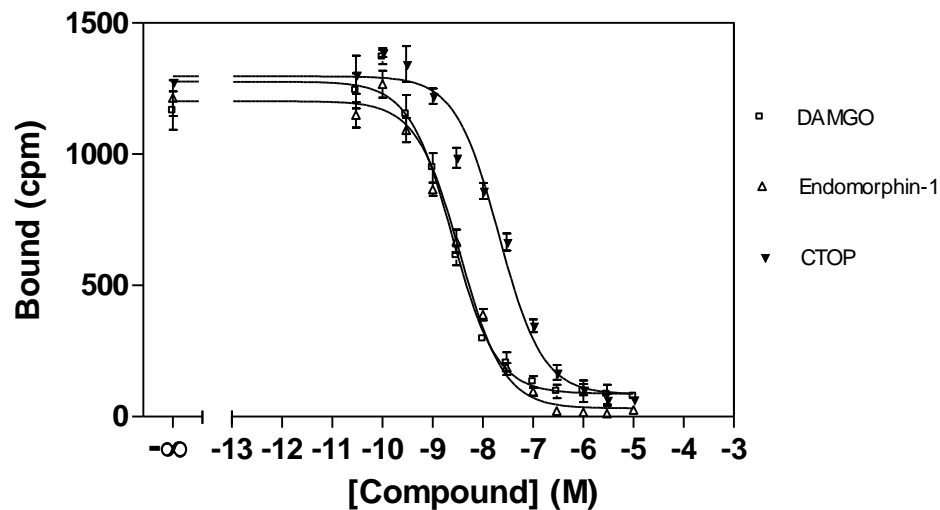


Figure 2: Competition binding assay curve (filtration)

96-well competition binding assay curve (5 μ g membranes/well, TopCount®). Recommended radioligand concentration = 0.75 nM.

*Even though two sites can be observed occasionally with some ligands, the data presented is derived from single site fitting.

Reference Compounds	K_i (nM)
DAMGO	1.0
Endomorphin-1	1.5
CTOP	8.7

Suggested Materials and Instrumentation

Please visit our website

www.perkinelmer.com/GPCR

This product is not for resale or distribution except by authorized distributors.

When applicable, the CMV promoter is covered by U.S. Patents 5,168,062 and 5,385,839, licensed to PerkinElmer by the University of Iowa research Foundation.

Products and their use may be covered by one or more of the following patents: US 6,103,492 licensed to PerkinElmer by the Indiana University.

LIMITED WARRANTY: PerkinElmer BioSignal Inc. warrants that, at the time of shipment, the products sold by it are free from defects in material and workmanship and conform to specifications which accompany the product. PerkinElmer BioSignal Inc. makes no other warranty, express or implied with respect to the products, including any warranty of merchantability or fitness for any particular purpose. Notification of any breach of warranty must be made within 60 days of receipt unless otherwise provided in writing by PerkinElmer BioSignal Inc. No claim shall be honored if the customer fails to notify PerkinElmer BioSignal Inc. within the period specified. The sole and exclusive remedy of the customer for any liability of PerkinElmer BioSignal Inc. of any kind including liability based upon warranty (express or implied whether contained herein or elsewhere), strict liability contract or otherwise is limited to the replacement of the goods or the refunds of the invoice price of goods. PerkinElmer BioSignal Inc. shall not in any case be liable for special, incidental or consequential damages of any kind.

PerkinElmer, Inc.
940 Winter Street
Waltham, MA 02451 USA
P: (800) 762-4000 or
(+1) 203-925-4602
www.perkinelmer.com



For a complete listing of our global offices, visit www.perkinelmer.com/ContactUs

Copyright ©2009, PerkinElmer, Inc. All rights reserved. PerkinElmer® is a registered trademark of PerkinElmer, Inc. All other trademarks are the property of their respective owners.