

human Opioid delta Receptor

Product Number: 6110549400UA

Lot Number: 3203658

Material Provided

Membranes: 1 x 400 units / 400 μ L frozen aliquot

Product Information

Cellular Background: HEK293

GenBank Accession Number: NM_000911 (C27F, A370R)

Unit Size: 9 μ g 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): 0.73

Expression Level (B_{max}): 6.4 pmol/mg membrane protein.

K_d for [³H]-Naltrindole: 0.42 nM

Protein Concentration: 9 μ g/ μ L

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

Recommended Assay Conditions

Assay Buffer: 50 mM Tris-HCl pH 7.4, 10 mM MgCl₂, 1 mM EDTA

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 Naltrindole (Sigma N115) 1 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/C filter (presoaked in 0.3% PEI).

Lot Specific Data

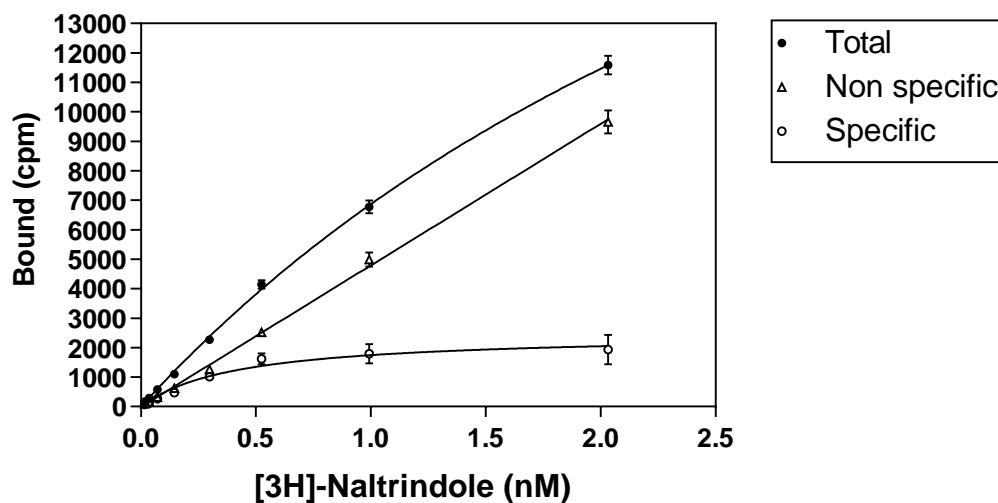


Figure 1: Saturation binding assay curve (filtration)
96-well saturation binding assay curve (9 μ g membranes/well, TopCount[®]) using [³H]-Naltrindole (Revvity NET1065 Lot No.: CUSMGPCR)

Typical Product Data

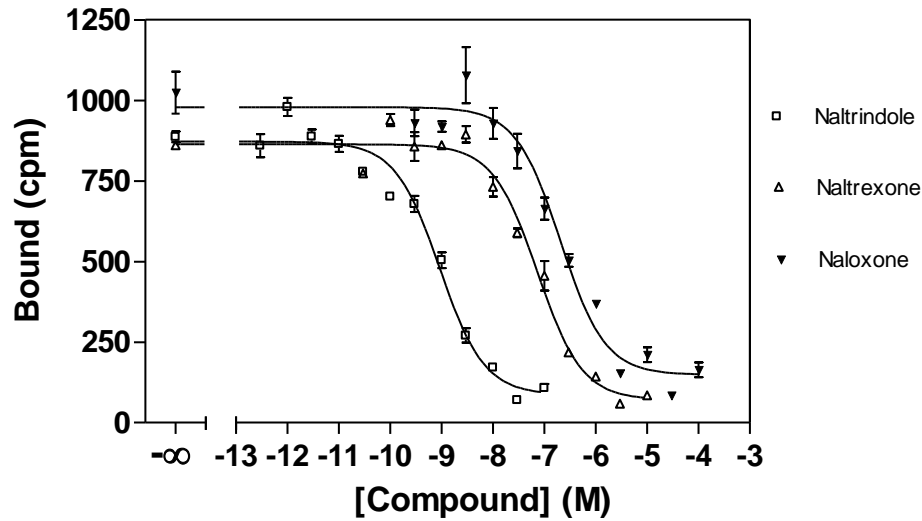


Figure 2: Competition binding assay curve (filtration)
 96-well competition binding assay curve (9 µg membranes/well, TopCount®). Recommended radioligand concentration = 0.15 nM.

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

Reference Compounds	Ki (nM)
Naltrindole	0.37
Naltrexone	30
Naloxone	83

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