

**MULTISCREEN™ MEMBRANE PREPARATION
HUMAN RECOMBINANT δ OPIOID RECEPTOR**

Data sheet

PRODUCT INFORMATION

Catalog Number: MC1351-1

Lot Number: MC1351-1-07262012

Quantity: 1 vial (7.1 mg/ml)

Host cell: CHO-K1

Transfection: Expression vector containing full-length human OPRD1 cDNA (GenBank Accession Number: NM_000911.3) with FLAG tag sequence at N-terminus

Recommended Storage: Liquid nitrogen

Background: δ opioid receptor (DOR) inhibits neurotransmitter release by reducing Ca⁺⁺ currents and increasing K⁺ conductance. In rats, morphine tolerance is associated with DOR-mediated activation of cortical CCKergic systems. There are indications that some DOR antagonists produce potent antitussive effects and may be considered as candidates of antitussive drugs. In contrast, some DOR agonists have shown antinociceptive, seizuregenic and convulsive properties, implicating a role for the DOR in depression. Early clinical experiments have demonstrated that exogenously administered opioid peptides had antidepressant activity in human patients, suggesting that the receptor may provide a new therapeutic target for treating depression.

Application: [³⁵S]GTPγS Binding Assay

Figure 1

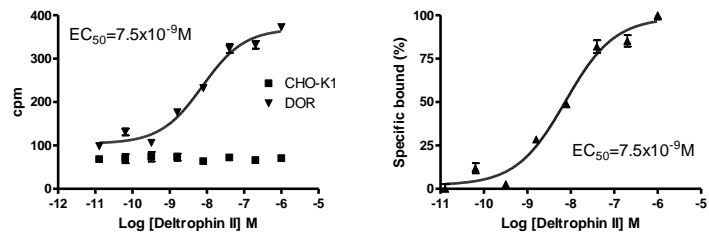


Figure 2

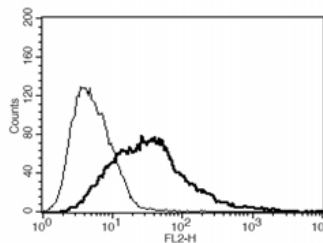


Figure 1. Dose-dependent [³⁵S]GTPγS Binding to δ opioid membrane upon treatment with agonist using homogenous proximity assay method. **Figure 2.** Receptor expression on cell surface measured by flow cytometry (FACS) using an anti-FLAG antibody. Thin line: parental cells; thick line: receptor-expressing cells.

References:

Becker *et al.* (2000) Delta-opioid receptor-mediated increase in cortical extracellular levels of cholecystinin-like material by subchronic morphine in rats. *Neuropharmacology* 39:161-171.

Kamei (2002) Delta-opioid receptor antagonists as a new concept for central acting antitussive drugs. *Pulm Pharmacol Ther* 15:235-240.

Broom *et al.* (2002) Behavioral effects of delta-opioid receptor agonists: potential antidepressants? *Jpn J Pharmacol* 90:1-6.

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