# MULTISCREEN™ DIVISION-ARRESTED CELL LINE HUMAN RECOMBINANT δ OPIOID RECEPTOR

## Data sheet

**PRODUCT INFORMATION**

**Catalog Number**: DC1351-1

**Lot Number**: DC1351-1-010926

**Quantity**: 1 vial (4 x $10^6$) frozen cells

**Freeze Medium**: Cellbanker 2

**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 upon receiving

**Propagation Medium:** DMEM/F12, 10% FBS

**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:** Functional assays

**Figure 1**

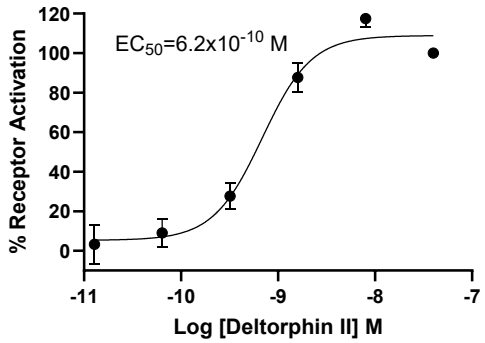


**Figure 1**. Dose-dependent inhibition of forskolin-stimulated intracellular cAMP accumulation upon treatment with ligand, measured with MULTISCREEN™ TR-FRET cAMP 1.0 No Wash Assay Kit (Multispan MSCM01).

**References:**


Becker *et al.* (2000) Delta-opioid receptor-mediated increase in cortical extracellular levels of cholecystokinin-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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