

## MULTISCREEN™ STABLE CELL LINE HUMAN RECOMBINANT EP1 RECEPTOR

### Data sheet

#### PRODUCT INFORMATION

**Catalog Number:** C1201a

**Lot Number:** C1201a-042910

**Quantity:** 1 vial ( $2 \times 10^6$ ) frozen cells

**Freeze Medium:** Sigma Freezing Medium (C-6164)

**Host cell:** HEK293T

**Transfection:** Expression vector containing full-length human XCR1 cDNA (GenBank accession number NM\_000955.2) with FLAG tag sequence at N-terminus

**Recommended Storage:** Liquid nitrogen upon receiving

**Propagation Medium:** DMEM, 10% FBS, 1  $\mu$ g/mL puromycin

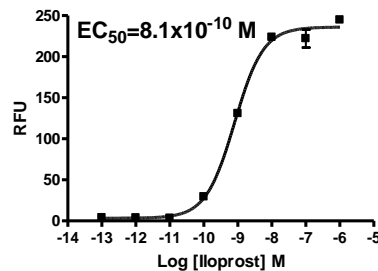
**Stability:** Stable in culture for minimum of two months

**Background:** EP1 receptor (or PTGER1) is a receptor for prostaglandin E2 (PGE2). The receptor may play a role in the smooth muscle contractile response to PGE2 in various tissues. EP1 receptor transactivates EGFR thus activating Akt, while activation of EGFR by its cognate ligand EGF increased COX-2 expression and PGE2 production. This crosstalk between EP1 and EGFR signaling synergistically promotes cancer cell growth and invasion. Some EP1-specific antagonists inhibit osteoclast formation induced by RANKL from the early stage of osteoclastogenesis.

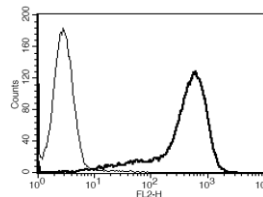
The Multispan EP1 cell line expresses EP1 cDNA that is identical to GenBank NM\_000955.2 except for 1 sense mutation, Thr→Ala at position 70. It has been reported as a natural variant.

**Application:** Functional assays

**Figure 1**



**Figure 2**



**Figure 1.** Dose-dependent stimulation of calcium flux upon treatment with ligand, monitored with FlexStation. **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:

Han and Wu (2005) Cyclooxygenase-2-derived prostaglandin E2 promotes human cholangiocarcinoma cell growth and invasion through EP1 receptor-mediated activation of epidermal growth factor receptor and AKT. *J Biol Chem* 280:24053-24063.

Tsujisawa *et al.* (2005) SC-19220, antagonist of prostaglandin E2 receptor EP1, inhibits osteoclastogenesis by RANKL. *J Bone Miner Res* 20:15-22.

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Ver. October 2005

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