MULTISCREEN™ DIVISION ARRESTED CELL LINE HUMAN RECOMBINANT EP1 RECEPTOR

Data sheet

PRODUCT INFORMATION

Catalog Number: DC1201a

Lot Number: 03/06/13

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

Freeze Medium: Sigma Freezing Medium (C-6164)

Host cell: HEK293T

Transfection: Expression vector containing full-length human PTGER1 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

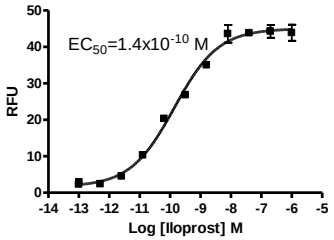
Stability: Stable for 1-2 days after thawing

Background: EP1 receptor (or PTGER1) is a receptor or 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



Dose-dependent stimulation of calcium flux upon treatment with ligand, measured with Multiscreen™ Calcium 1.0 No Wash Assay Kit (Multispan MSCA01).

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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