

**MULTISCREEN™ STABLE CELL LINE
HUMAN RECOMBINANT EP4 RECEPTOR**

PRODUCT INFORMATION

Catalog Number: C1204

Lot Number: C1204-012309

Quantity: 1 vial (2 x 10⁶) frozen cells

Freeze Medium: Sigma Freezing Medium (C-6164)

Host cell: HEK293T

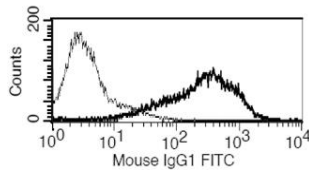
Transfection: Expression vector containing full-length human PTGER4 cDNA (GenBank Accession Number NM_000958) with FLAG tag sequence at N-terminus

Recommended Storage: Liquid nitrogen upon receiving

Propagation Medium: DMEM, 10% FBS, 1 µg/mL puromycin

Stability: Stable after minimum two months continuous growth

Figure 3



**Data
sheet**

Background: The human prostaglandin E2 (PGE2) receptor EP4 (or PTGER4) is abundantly expressed. Activation of EP4 receptor induces osteoblasts and thereby stimulates *de novo* bone formation. Results from targeted deletion of the EP4 receptor also suggest that the EP4 subtype of the PGE2 receptor is involved in lipopolysaccharide-induced bone resorption. Modulating EP4 action may thus prove to be clinically useful for the treatment of bacterially induced bone loss, such as in periodontitis and osteomyelitis. EP4 also plays a role in the anti-inflammatory action of PGE2 in human macrophage.

Application: Functional assays

Figure 1

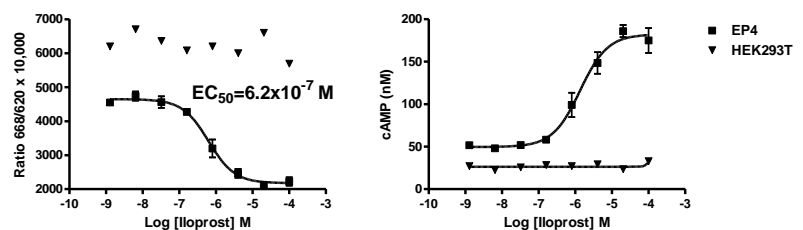


Figure 2

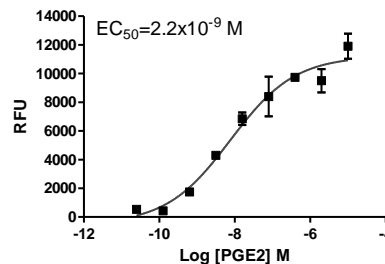


Figure 1. Dose-dependent stimulation of intracellular cAMP level upon treatment with ligand, measured with Multiscreen™ TR-FRET cAMP 1.0 No Wash Assay Kit (Multispan MSCM01). **Figure2.** Dose-dependent stimulation of calcium flux upon treatment with ligand, measured with Multiscreen™ Calcium 1.0 No Wash Assay Kit (Multispan MSCA01). **Figure 3.** 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:

Morath *et al.* (1999) Immunolocalization of the four prostaglandin E2 receptor proteins EP1, EP2, EP3, and EP4 in human kidney. *J Am Soc Nephrol* 10:1851-1860.

Zhang *et al.* (2000) Characterization of murine vasopressor and vasodepressor prostaglandin E(2) receptors. *Hypertension* 35:1129-1134.

Li X *et al.* (2009) Prostaglandin E(2) and its cognate EP receptors control human adult articular cartilage homeostasis and are linked to the pathophysiology of osteoarthritis. *Arthritis Rheum* 60:513-523.

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