

MULTISCREEN™ STABLE CELL LINE HUMAN RECOMBINANT EP3 RECEPTOR

PRODUCT INFORMATION

Catalog Number: C1203-1d

Lot Number: C1203-1d-091611

Quantity: 1 vial (2×10^6) frozen cells

Freeze Medium: Sigma Freezing Medium (C-6164)

Host cell: CHO-K1

Transfection: Expression vector containing full-length human PTGER3 cDNA (GenBank Accession Number NM_000957) with FLAG tag sequence at N-terminus

Recommended Storage: Liquid nitrogen upon receiving

Propagation Medium: DMEM-F12, 10% FBS, 10 μ g/mL puromycin

Stability: Stable in culture for minimum of two months

Data sheet

Background: Prostaglandin E2 (PGE2) is involved in a number of physiologic and pathophysiologic events in many tissues of the body. The biologic effects of PGE2 are mediated through interaction with specific membrane-bound G protein-coupled prostanoid EP receptors. EP3 receptor (or PTGER3) is expressed as multiple transcripts through alternative splicing, with each transcript showing a different tissue-specific distribution. PGE2 may mediate fever generation in response to both endogenous and exogenous pyrogens by acting at the EP3 receptor. EP3-mediated neuronal pathways converge at corticotropin-releasing hormone containing neurons in the paraventricular nucleus of the hypothalamus to induce HPA axis activation during sickness.

Application: Functional assays

Figure 1

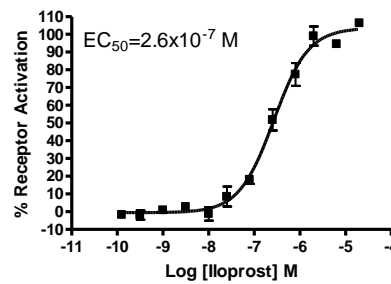


Figure 2

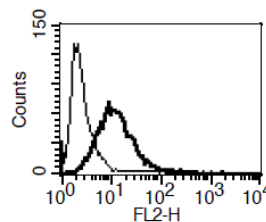


Figure 1. Dose-dependent inhibition of forskolin-stimulated intracellular cAMP accumulation upon treatment with ligand, measured with Multiscreen™ TR-FRET cAMP 1.0 No Wash Assay Kit (Multispan MSCM01). **Figure 2.** Receptor expression on cell surface measured by flow cytometry (FACS) using an anti-FLAG antibody. Thin line: parental cells; thick line: receptor-expressing cells.

References:

Adam *et al.* (1994) Cloning and expression of three isoforms of the human EP(3) prostanoid receptor. *FEBS Lett* 338:170-174.

Matsuoka *et al.* (2003) Impaired adrenocorticotrophic hormone response to bacterial endotoxin in mice deficient in prostaglandin E receptor EP1 and EP3 subtypes. *Proc Nat Acad Sci USA* 100:4132-4137.

Ushikubi *et al.* (1998) Impaired febrile response in mice lacking the prostaglandin E receptor subtype EP(3). *Nature* 395:281-284.

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