

Produktinformation



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SANTA CRUZ BIOTECHNOLOGY, INC.

PGF2 α R shRNA (h) Lentiviral Particles: sc-44987-V



BACKGROUND

Prostaglandin receptors are integral membrane proteins that bind prostaglandins with high affinity. This triggers changes in the cell which influence cell behavior. Prostaglandin receptor subtypes are named according to their relative affinities for the endogenous prostaglandins. These include Prostaglandin D2 (DP receptors), Prostaglandin E2 (EP1, EP2 and EP3 receptors), Prostaglandin F2- α (FP receptors), and prostacyclin (IP receptors). Prostaglandin F2- α receptor (PGF2 α R), also designated prostanoid FP receptor is an integral membrane protein. It acts as a receptor for Prostaglandin F2- α . The activity of PGF2 α R is mediated by G proteins that activate phosphatidylinositol-calcium second messenger system. In the corpus luteum, PGF2 α R is involved in luteolysis initiation.

REFERENCES

- 1. Abramovitz, M., et al. 1994. Cloning and expression of a cDNA for the human prostanoid FP receptor. J. Biol. Chem. 269: 2632-2636.
- 2. Bishop, C.V. and Stormshak, F. 2005. Nongenomic action of progesterone inhibits oxytocin-induced phosphoinositide hydrolysis and Prostaglandin F2- α secretion in the ovine endometrium. Endocrinology 147: 937-942.
- 3. Sales, K.J., et al. 2005. A novel angiogenic role for prostaglandin F2 α -FP receptor interaction in human endometrial adenocarcinomas. Cancer Res. 65: 7707-7716.
- 4. Yamaji, K., et al. 2005. Prostaglandins E1 and E2, but not F2 α or latanoprost, inhibit monkey ciliary muscle contraction. Curr. Eye Res. 30: 661-665.
- 5. Camargo, P.M., et al. 2005. Prostaglandins E(2) and $F(2\alpha)$ enhance differentiation of cementoblastic cells. J. Periodontol. 76: 303-309.

CHROMOSOMAL LOCATION

Genetic locus: PTGFR (human) mapping to 1p31.1.

PRODUCT

PGF2_αR shRNA (h) Lentiviral Particles is a pool of concentrated, transduction-ready viral particles containing 3 target-specific constructs that encode 19-25 nt (plus hairpin) shRNA designed to knock down gene expression. Each vial contains 200 µl frozen stock containing 1.0 x 10⁶ infectious units of virus (IFU) in Dulbecco's Modified Eagle's Medium with 25 mM HEPES pH 7.3. Suitable for 10-20 transductions. Also see PGF2 α R siRNA (h): sc-44987 and PGF2 α R shRNA Plasmid (h): sc-44987-SH as alternate gene silencing products.

RESEARCH USE

The purchase of this product conveys to the buyer the nontransferable right to use the purchased amount of the product and all replicates and derivatives for research purposes conducted by the buyer in his laboratory only (whether the buyer is an academic or for-profit entity). The buyer cannot sell or otherwise transfer (a) this product (b) its components or (c) materials made using this product or its components to a third party, or otherwise use this product or its components or materials made using this product or its components for Commercial Purposes.

APPLICATIONS

 $PGF2\alpha R$ shRNA (h) Lentiviral Particles is recommended for the inhibition of PGF2 α R expression in human cells.

SUPPORT REAGENTS

Control shRNA Lentiviral Particles: sc-108080. Available as 200 µl frozen viral stock containing 1.0 x 10⁶ infectious units of virus (IFU); contains an shRNA construct encoding a scrambled sequence that will not lead to the specific degradation of any known cellular mRNA.

GENE EXPRESSION MONITORING

PGF2 α R (T-15): sc-46449 is recommended as a control antibody for monitoring of PGF2 α R gene expression knockdown by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) or immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker[™] compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz[™] Mounting Medium: sc-24941.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor PGF2 α R gene expression knockdown using RT-PCR Primer: PGF2 α R (h)-PR: sc-44987-PR (20 µl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

BIOSAFETY

Lentiviral particles can be employed in standard Biosafety Level 2 tissue culture facilities (and should be treated with the same level of caution as with any other potentially infectious reagent). Lentiviral particles are replication-incompetent and are designed to self-inactivate after transduction and integration of shRNA constructs into genomic DNA of target cells.

STORAGE

Store lentiviral particles at -80° C. Stable for at least one year from the date of shipment. Once thawed, particles can be stored at 4° C for up to one week. Avoid repeated freeze thaw cycles.

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.