

PIBF siRNA (h): sc-61347

BACKGROUND

PIBF (progesterone-Induced blocking factor 1) is synthesized during pregnancy in response to progesterone by progesterone receptor-positive T lymphocytes (mostly γ - δ T cells). In the presence of PIBF, natural killer (NK) cells inhibit the release of perforin from storage granules and therefore fail to lyse target cells. In humans, the amount of cells that express PIBF is significantly higher in healthy pregnant women than in women at risk for premature pregnancy termination. Full-length PIBF is associated with the nucleus, whereas secretion of shorter forms is induced by activation of the cell. Research suggests that PIBF functions as a transcription factor in its full-length form, while smaller forms may act as cytokines. The PIBF gene encodes a deduced hydrophilic 757-amino acid α -helical protein with an N-terminal signal sequence, a leucine zipper motif, a basic zipper sequence, a PEST sequence, a nuclear localization signal, an endoplasmic reticulum membrane retention signal, and many presumed N-glycosylation and phosphorylation sites.

REFERENCES

1. Check, J.H., et al. 1997. Lymphocyte immunotherapy (LI) increases serum levels of progesterone induced blocking factor (PIBF). *Am. J. Reprod. Immunol.* 37: 17-20.
2. Check, J.H., et al. 1997. Expression of an immuno-modulatory protein known as PIBF does not correlate with first trimester spontaneous abortions in progesterone supplemented women. *Am. J. Reprod. Immunol.* 37: 330-334.
3. Laskarin, G., et al. 2002. Progesterone induced blocking factor (PIBF) mediates progesterone induced suppression of decidual lymphocyte cytotoxicity. *Am. J. Reprod. Immunol.* 48: 201-209.

CHROMOSOMAL LOCATION

Genetic locus: PIBF1 (human) mapping to 13q22.1.

PRODUCT

PIBF siRNA (h) is a pool of 3 target-specific 19-25 nt siRNAs designed to knock down gene expression. Each vial contains 3.3 nmol of lyophilized siRNA, sufficient for a 10 μ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see PIBF shRNA Plasmid (h): sc-61347-SH and PIBF shRNA (h) Lentiviral Particles: sc-61347-V as alternate gene silencing products.

For independent verification of PIBF (h) gene silencing results, we also provide the individual siRNA duplex components. Each is available as 3.3 nmol of lyophilized siRNA. These include: sc-61347A, sc-61347B and sc-61347C.

STORAGE AND RESUSPENSION

Store lyophilized siRNA duplex at -20° C with desiccant. Stable for at least one year from the date of shipment. Once resuspended, store at -20° C, avoid contact with RNAses and repeated freeze thaw cycles.

Resuspend lyophilized siRNA duplex in 330 μ l of the RNase-free water provided. Resuspension of the siRNA duplex in 330 μ l of RNase-free water makes a 10 μ M solution in a 10 μ M Tris-HCl, pH 8.0, 20 mM NaCl, 1 mM EDTA buffered solution.

APPLICATIONS

PIBF siRNA (h) is recommended for the inhibition of PIBF expression in human cells.

SUPPORT REAGENTS

For optimal siRNA transfection efficiency, Santa Cruz Biotechnology's siRNA Transfection Reagent: sc-29528 (0.3 ml), siRNA Transfection Medium: sc-36868 (20 ml) and siRNA Dilution Buffer: sc-29527 (1.5 ml) are recommended. Control siRNAs or Fluorescein Conjugated Control siRNAs are available as 10 μ M in 66 μ l. Each contain a scrambled sequence that will not lead to the specific degradation of any known cellular mRNA. Fluorescein Conjugated Control siRNAs include: sc-36869, sc-44239, sc-44240 and sc-44241. Control siRNAs include: sc-37007, sc-44230, sc-44231, sc-44232, sc-44233, sc-44234, sc-44235, sc-44236, sc-44237 and sc-44238.

GENE EXPRESSION MONITORING

PIBF (A-2): sc-376840 is recommended as a control antibody for monitoring of PIBF 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 reagents are recommended: 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker[™] Molecular Weight Standards: sc-2035, UltraCruz[®] Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use m-IgG κ BP-FITC: sc-516140 or m-IgG κ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz[®] Mounting Medium: sc-24941 or UltraCruz[®] Hard-set Mounting Medium: sc-359850.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor PIBF gene expression knockdown using RT-PCR Primer: PIBF (h)-PR: sc-61347-PR (20 μ l). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

SELECT PRODUCT CITATIONS

1. Gutiérrez-Rodríguez, A., et al. 2017. Proliferative and invasive effects of progesterone-induced blocking factor in human glioblastoma cells. *Biomed. Res. Int.* 2017: 1295087.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

PROTOCOLS

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