SANTA CRUZ BIOTECHNOLOGY, INC.

PIBF (G-10): sc-271504

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 presumeed 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.
4. Polgar, B., et al. 2003. Molecular cloning and immunologic characterization of a novel cDNA coding for progesterone-induced blocking factor. J. Immunol. 171: 5956-5963.
5. Lachmann, M., et al. 2004. PIBF (progesterone induced blocking factor) is overexpressed in highly proliferating cells and associated with the centrosome. Int. J. Cancer 112: 51-60.
6. Check, J.H., et al. 2005. Miscarriage in the first trimester according to the presence or absence of the progesterone-induced blocking factor at three to five weeks from conception in progesterone supplemented women. Clin. Exp. Obstet. Gynecol. 32: 13-14.
7. Kalinka, J. and Szekeres-Bartho, J. 2005. The impact of dydrogesterone supplementation on hormonal profile and progesterone-induced blocking factor concentrations in women with threatened abortion. Am. J. Reprod. Immunol. 53: 166-171.

CHROMOSOMAL LOCATION

Genetic locus: PIBF1 (human) mapping to 13q22.1; Pibf1 (mouse) mapping to 14 E2.2.

SOURCE

PIBF (G-10) is a mouse monoclonal antibody raised against amino acids 1-300 mapping at the N-terminus of PIBF of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

PIBF (G-10) is recommended for detection of PIBF of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for PIBF siRNA (h): sc-61347, PIBF siRNA (m): sc-61348, PIBF shRNA Plasmid (h): sc-61347-SH, PIBF shRNA Plasmid (m): sc-61348-SH, PIBF shRNA (h) Lentiviral Particles: sc-61347-V and PIBF shRNA (m) Lentiviral Particles: sc-61348-V.

Molecular Weight of full-length PIBF: 89 kDa.

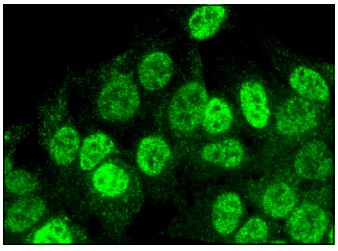
Molecular Weight of PIBF bioactive form: 48 kDa.

Positive Controls: MDA-MB-231 cell lysate: sc-2232, HeLa nuclear extract: sc-2120 or MCF7 whole cell lysate: sc-2206.

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ 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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



PIBF (G-10): sc-271504. Immunofluorescence staining of formalin-fixed Hep G2 cells showing nuclear localization.

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

RESEARCH USE

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