SANTA CRUZ BIOTECHNOLOGY, INC.

PIBF (F2.45): sc-130440

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., Arwitz, M., Gross, J., Peymer, M. and Szekeres-Bartho, J. 1997. Lymphocyte immunotherapy (LI) increases serum levels of progesterone induced blocking factor (PIBF). Am. J. Reprod. Immunol. 37: 17-20.
2. Check, J.H., Ostrzenski, A. and Klimek, R. 1997. Expression of an immunomodulatory 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., Tokmadzic, V.S., Strbo, N., Bogovic, T., Szekeres-Bartho, J., Randic, L., Podack, E.R. and Rukavina, D. 2002. Progesterone induced blocking factor (PIBF) mediates progesterone induced suppression of decidual lymphocyte cytotoxicity. Am. J. Reprod. Immunol. 48: 201-209.
4. Polgar, B., Kispal, G., Lachmann, M., Paar, C., Nagy, E., Csere, P., Miko, E., Szereday, L., Varga, P. and Szekeres-Bartho, J. 2003. Molecular cloning and immunologic characterization of a novel cDNA coding for progesterone-induced blocking factor. J. Immunol. 171: 5956-5963.
5. Lachmann, M., Gelbmann, D., Kalman, E., Polgar, B., Buschle, M., Von Gabain, A., Szekeres-Bartho, J. and Nagy, E. 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., Levin, E., Bollendorf, A. and Locuniak, J. 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.

RESEARCH USE

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

SOURCE

PIBF (F2.45) is a mouse monoclonal antibody raised against recombinant PIBF of human origin.

PRODUCT

Each vial contains 100 µg IgG_1 in 1.0 ml PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

PIBF (F2.45) is recommended for detection of PIBF of human origin by immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (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 shRNA Plasmid (h): sc-61347-SH and PIBF shRNA (h) Lentiviral Particles: sc-61347-V.

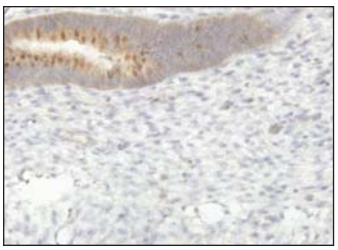
Molecular Weight of full-length PIBF: 89 kDa.

Molecular Weight of PIBF bioactive form: 48 kDa.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Immunofluorescence: use goat anti-mouse IgG-FITC: sc-2010 (dilution range: 1:100-1:400) or goat anti-mouse IgG-TR: sc-2781 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941. 2) Immunohistochemistry: use ImmunoCruz™: sc-2050 or ABC: sc-2017 mouse IgG Staining Systems.

DATA



PIBF (F2.45): sc-130440. Immunoperoxidase staining of formalin-fixed, paraffin-embedded human endometrium tissue showing nuclear and cytoplasmic localization.

STORAGE

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

PROTOCOLS

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