SANTA CRUZ BIOTECHNOLOGY, INC.

PBF (NB-A25): sc-134414

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

PBF, also known as PTTG1IP (pituitary tumor-transforming 1 interacting protein), is a 180 amino acid single-pass type I membrane protein that localizes to both the cytoplasm and the nucleus and contains a coiled-coil domain. Expressed ubiquitously, PBF interacts with PTTG and is thought to facilitate the nuclear translocation of PTTG, thereby allowing the PTTG-dependent transcriptional activation of fibroblast growth factor (FGF). The gene encoding PBF maps to human chromosome 21q22.3, which houses approximately 300 genes and comprises nearly 1.5% of the human genome. Chromosome 21-associated disorders include Alzheimer's disease, amyotrophic lateral sclerosis and, most notably, Down syndrome (also known as trisomy 21).

REFERENCES

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2. Yaspo, M.L., et al. 1998. Cloning of a novel human putative type Ia integral membrane protein mapping to 21q22.3. Genomics 49: 133-136.
3. Chien, W. and Pei, L. 2000. A novel binding factor facilitates nuclear translocation and transcriptional activation function of the pituitary tumor-transforming gene product. J. Biol. Chem. 275: 19422-19427.
4. Online Mendelian Inheritance in Man, OMIM™. 2000. Johns Hopkins University, Baltimore, MD. MIM Number: 603784. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
5. Boelaert, K., et al. 2003. A potential role for PTTG/securin in the developing human fetal brain. FASEB J. 17: 1631-1639.
6. Tfelt-Hansen, J., et al. 2004. Expression of pituitary tumor transforming gene (PTTG) and its binding protein in human astrocytes and astrocytoma cells: function and regulation of PTTG in U87 astrocytoma cells. Endocrinology 145: 4222-4231.
7. Boelaert, K., et al. 2007. PTTG and PBF repress the human sodium iodide symporter. Oncogene 26: 4344-4356.

CHROMOSOMAL LOCATION

Genetic locus: PTTG1IP (human) mapping to 21q22.3.

SOURCE

PBF (NB-A25) is a mouse monoclonal antibody raised against recombinant PBF protein of human origin.

PRODUCT

Each vial contains 100 µg IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

STORAGE

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

APPLICATIONS

PBF (NB-A25) is recommended for detection of PBF of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)] and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for PBF siRNA (h): sc-91397, PBF shRNA Plasmid (h): sc-91397-SH and PBF shRNA (h) Lentiviral Particles: sc-91397-V.

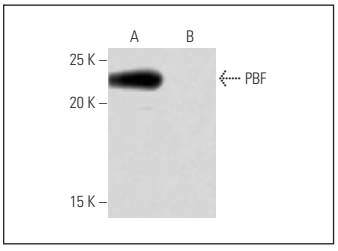
Molecular Weight of PBF: 22 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200 or human PBF transfected 293T whole cell lysate.

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).

DATA



PBF (NB-A25): sc-134414. Western blot analysis of PBF expression in human PBF transfected (**A**) and non-transfected (**B**) 293T whole cell lysates.

SELECT PRODUCT CITATIONS

1. Huang, S.Q., et al. 2019. Pituitary tumor transforming gene binding factor (PBF) is required for androgen-induced prostate cancer proliferation and invasion. Neoplasma 66: 327-335.

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.