

PBF (S-15): sc-83317

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 21, 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

1. Yaspo, M.L., Gellen, L., Mott, R., Korn, B., Nizetic, D., Poustka, A.M. and Lehrach, H. 1995. Model for a transcript map of human chromosome 21: isolation of new coding sequences from exon and enriched cDNA libraries. *Hum. Mol. Genet.* 4: 1291-1304.
2. Yaspo, M.L., Aaltonen, J., Horelli-Kuitunen, N., Peltonen, L. and Lehrach, H. 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., Tannahill, L.A., Bulmer, J.N., Kachilele, S., Chan, S.Y., Kim, D., Gittoes, N.J., Franklyn, J.A., Kilby, M.D. and McCabe, C.J. 2003. A potential role for PTTG/securin in the developing human fetal brain. *FASEB J.* 17: 1631-1639.
6. Tfelt-Hansen, J., Yano, S., Bandyopadhyay, S., Carroll, R., Brown, E.M. and Chattopadhyay, N. 2004. Expression of pituitary tumor transforming gene (PTTG) and its binding protein in human astrocytes and astrocytoma cells: function and regulation of PTTG in U-87 astrocytoma cells. *Endocrinology* 145: 4222-4231.
7. Boelaert, K., Smith, V.E., Stratford, A.L., Kogai, T., Tannahill, L.A., Watkinson, J.C., Eggo, M.C., Franklyn, J.A. and McCabe, C.J. 2007. PTTG and PBF repress the human sodium iodide symporter. *Oncogene* 26: 4344-4356.

CHROMOSOMAL LOCATION

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

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.

SOURCE

PBF (S-15) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping within an internal region of PBF of human origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-83317 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

PBF (S-15) 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)], 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); non cross-reactive with PTTG or PTTG1.

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.

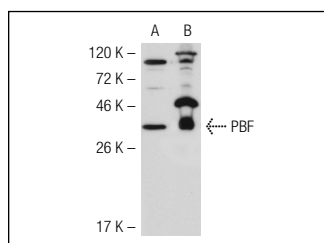
Molecular Weight of PBF: 22 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



PBF (S-15): sc-83317. Western blot analysis of PBF expression in 293T (A) and HeLa (B) whole cell lysates.

RESEARCH USE

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