

PTTG (m): 293T Lysate: sc-125874

BACKGROUND

The product of the oncogene PTTG, pituitary tumor transforming gene, is a human homolog of the anaphase-inhibitor vertebrate protein, securin. PTTG contains a basic amino-terminal domain and an acidic carboxy-terminal domain, which acts as a transactivation domain when fused to a heterologous DNA binding domain. Human PTTG is overexpressed in Jurkat and is also detected in human thymus, testis and placenta. PTTG is mainly expressed in the cytoplasm and is also partially localized to the nucleus. Vertebrate PTTG regulates the separin Esp1, which promotes chromatid separation, to overcome the cohesive forces that hold sister chromatids together. This regulatory function of PTTG suggests that defective regulation of cohesion may contribute to cancer by promoting chromosome instability. Although vertebrate PTTG shares cell-cycle functions with its yeast securin counterparts Pds1p and Cut2, none share sequence homology.

REFERENCES

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2. Dominguez, A., et al. 1998. hPTTG, a human homologue of rat PTTG, is overexpressed in hematopoietic neoplasms. Evidence for a transcriptional activation function of hPTTG. *Oncogene* 17: 2187-2193.
3. Zou, H., et al. 1999. Identification of a vertebrate sister-chromatid separation inhibitor involved in transformation and tumorigenesis. *Science* 285: 418-422.
4. Toth, A., et al. 1999. Yeast cohesion complex requires a conserved protein, Eco1p (Ctf7), to establish cohesion between sister chromatids during DNA replication. *Genes Dev.* 13: 320.
5. Uhlmann, F., et al. 1999. Sister-chromatid separation at anaphase onset is promoted by cleavage of the cohesion subunit Scc1. *Nature* 400: 37-42.
6. Minematsu, T., et al. 2006. PTTG overexpression is correlated with angiogenesis in human pituitary adenomas. *Endocr. Pathol.* 17: 143-153.
7. Wang, Z., et al. 2006. Expression of pituitary tumor-transforming gene in patients with multiple myeloma. *Zhongguo Shi Yan Xue Ye Xue Za Zhi* 14: 1143-1145.
8. Cristina, C., et al. 2007. PTTG expression in different experimental and human prolactinomas in relation to dopaminergic control of lactotropes. *Mol. Cancer* 6: 4.
9. Boelaert, K., et al. 2007. PTTG and PBF repress the human sodium iodide symporter. *Oncogene* 26: 4344-4356.

STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

PROTOCOLS

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

CHROMOSOMAL LOCATION

Genetic locus: Pttg1 (mouse) mapping to 11 A5.

PRODUCT

PTTG (m): 293T Lysate represents a lysate of mouse PTTG transfected 293T cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

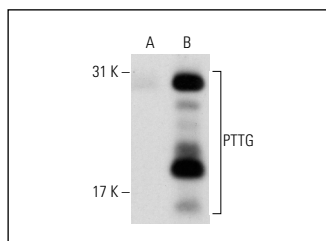
APPLICATIONS

PTTG (m): 293T Lysate is suitable as a Western Blotting positive control for mouse reactive PTTG antibodies. Recommended use: 10-20 µl per lane.

Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

PTTG (3F313): sc-71947 is recommended as a positive control antibody for Western Blot analysis of enhanced human PTTG expression in PTTG transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

DATA



PTTG (3F313): sc-71947. Western blot analysis of PTTG expression in non-transfected: sc-117752 (A) and mouse PTTG transfected: sc-125874 (B) 293T whole cell lysates.

RESEARCH USE

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