

PTTG (H-160): sc-22772



The Power to Question

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.

CHROMOSOMAL LOCATION

Genetic locus: PTTG1 (human) mapping to 5q33.3, PTTG2 (human) mapping to 4p14; Pttg1 (mouse) mapping to 11 A5.

SOURCE

PTTG (H-160) is a rabbit polyclonal antibody raised against amino acids 1-160 of PTTG of human origin.

PRODUCT

Each vial contains 200 µg IgG 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

PTTG (H-160) is recommended for detection of PTTG of mouse, rat, and human origin, and PTTG2 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), 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).

PTTG (H-160) is also recommended for detection of PTTG and PTTG2 in additional species, including canine and bovine.

Suitable for use as control antibody for PTTG siRNA (m): sc-37492, PTTG shRNA Plasmid (m): sc-37492-SH and PTTG shRNA (m) Lentiviral Particles: sc-37492-V.

Molecular Weight (predicted) of PTTG: 22 kDa.

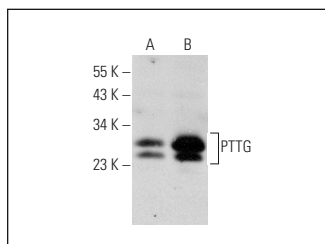
Molecular Weight (observed) of PTTG: 20-29 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204, rat pituitary gland extract: sc-364807 or MOLT-4 cell lysate: sc-2233.

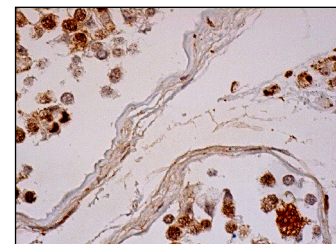
RECOMMENDED SECONDARY REAGENTS

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. 4) Immunohistochemistry: use ImmunoCruz™: sc-2051 or ABC: sc-2018 rabbit IgG Staining Systems.

DATA



PTTG (H-160): sc-22772. Western blot analysis of PTTG expression in Jurkat (A) and MOLT-4 (B) whole cell lysates.



PTTG (H-160): sc-22772. Immunoperoxidase staining of formalin fixed, paraffin-embedded human testis tissue showing nuclear staining of cells in seminiferous ducts and Leydig cells.

SELECT PRODUCT CITATIONS

- Lai, Y., et al. 2007. The important anti-apoptotic role and its regulation mechanism of PTTG1 in UV-induced apoptosis. *J. Biochem. Mol. Biol.* 40: 966-972.
- Ma, H.T., et al. 2009. Cyclin A2-cyclin-dependent kinase 2 cooperates with the PLK1-SCFβ-TrCP1-EMI1-anaphase-promoting complex/cyclosome axis to promote genome reduplication in the absence of mitosis. *Mol. Cell Biol.* 29: 6500-6514.
- Chiu, S.C., et al. 2014. The mitosis-regulating and protein-protein interaction activities of astrin are controlled by aurora-A-induced phosphorylation. *Am. J. Physiol. Cell Physiol.* 307: C466-C478.

RESEARCH USE

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



Try **PTTG (DCS-280): sc-56207** or **PTTG (SPM210): sc-56461**, our highly recommended monoclonal alternatives to PTTG (H-160). Also, for AC, HRP, FITC, PE, Alexa Fluor® 488 and Alexa Fluor® 647 conjugates, see **PTTG (DCS-280): sc-56207**.