SANTA CRUZ BIOTECHNOLOGY, INC.

PAP-β (I-18): sc-26858

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Polyadenylation of the 3-prime ends of eukaryotic mRNAs is a key event that takes place in the nucleus during maturation of mRNA. The reaction includes endoribonucleolytic cleavage of the pre-RNA at the poly(A) site that leads to synthesis of the poly(A) tail at the 3-prime end of the upstream cleavage product. The poly(A) polymerase (PAP) is required The adenosine addition reaction depends on poly(A) polymerase (PAP) activity. The testis express PAP-β (TPAP) as a 70 kDa protein in the cytoplasm of spermatogenic cells. The adenosine addition function of PAP-β plays a critical role in male germ cell production. PAP-β-deficient transgenic mice display impaired expression of haploid-specific genes that are necessary for spermatogenesis. The intronless gene encoding human PAP-β maps to chromosome 7p22.3.

REFERENCES

1. Christofori, G. and Keller, W. 1989. Poly(A) polymerase purified from HeLa cell nuclear extract is required for both cleavage and polyadenylation of pre-mRNA *in vitro*. Mol. Cell. Biol. 9: 193-203.
2. Lee, Y.J., Lee, Y., and Chung, J.H. 2000. An intronless gene encoding a poly(A) polymerase is specifically expressed in testis. FEBS Letts. 487: 287-292. PMID: 11150526
3. Kashiwabara, S., Zhuang, T., Yamagata, K., Noguchi, J., Fukamizu, A., and Baba, T. 2000. Identification of a novel isoform of poly(A) polymerase, TPAP, specifically present in the cytoplasm of spermatogenic cells. Dev. Biol. 228: 106-115. PMID: 11087630
4. Kashiwabara, S., et al. 2002. Regulation of spermatogenesis by testis-specific, cytoplasmic poly(A) polymerase TPAP. Science 298: 1999-2002. PMID: 12471261
5. LocusLink Report (LocusID: 56903). http://www.ncbi.nlm.nih.gov/LocusLink

CHROMOSOMAL LOCATION

Genetic locus: PAPOLB (human) mapping to 7p22.1; Papolb (mouse) mapping to 5 G2.

SOURCE

PAP-β (I-18) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of PAP-β of mouse origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-26858 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

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

RESEARCH USE

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

APPLICATIONS

PAP-β (I-18) is recommended for detection of PAP-β of mouse and rat 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).

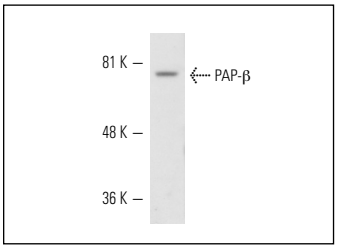
Molecular Weight of PAP-β: 70 kDa.

Positive Controls: rat testis extract: sc-2400.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (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 donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



PAP-β (I-18): sc-26858. Western blot analysis of PAP-β expression in rat testis tissue extract.

PROTOCOLS

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