## SANTA CRUZ BIOTECHNOLOGY, INC.

# USP26 (W-12): sc-51013



#### BACKGROUND

Ubiquitin specific peptidase 26 (USP26) is a deubiquitinating enzyme that is a member of the peptidase C19 family and contains Cys and His domains and one UBP-type zinc finger. USP26 plays a role in negative regulation of gluconeogenesis and is required for proteosome-dependent catabolite degredation of fructose-1,6-bisphosphate. It is involved with the 26S Proteasome in the ubiquitin-dependent proteolytic pathway. USP26 accelerates proteosomal breakdown of ubiquitinated proteins, while disassembling free ubiquitin chains. The catalytic activity of USP26 involves the combination of the ubiquitin carboxyl-terminal thiolester and water to produce ubiquitin and a thiol. USP26 is likely located in the cytoplasm and is specifically expressed in testis tissue. The gene maps to the X chromosome. Alterations in the gene are associated with Sertoli cell-only syndrome and male infertility.

## REFERENCES

- 1. Wang, P.J., McCarrey, J.R., Yang, F. and Page, D.C. 2001. An abundance of X-linked genes expressed in spermatogonia. Nat. Genet. 27: 422-426.
- Paduch, D.A., Mielnik, A. and Schlegel, P.N. 2005. Novel mutations in testis-specific ubiquitin protease 26 gene may cause male infertility and hypogonadism. Reprod. Biomed. Online 10: 747-754.
- Stouffs, K., Lissens, W., Tournaye, H., Van Steirteghem, A. and Liebaers, I. 2005. Possible role of USP26 in patients with severely impaired spermatogenesis. Eur. J. Hum. Genet. 13: 336-340.
- Devoy, A., Soane, T., Welchman, R. and Mayer, R.J. 2005. The ubiquitinproteasome system and cancer. Essays Biochem. 41: 187-203.
- Ravel, C., El Houate, B., Chantot, S., Lourenço, D., Dumaine, A., Rouba, H., Bandyopadahyay, A., Radhakrishna, U., Das, B., Sengupta, S., Mandelbaum, J., Siffroi, J.P. and McElreavey, K. 2006. Haplotypes, mutations and male fertility: the story of the testis-specific ubiquitin protease USP26. Mol. Hum. Reprod. 12: 643-646.
- Carrell, D.T., De Jonge, C. and Lamb, D.J. 2006. The genetics of male infertility: a field of study whose time is now. Arch. Androl. 52: 269-274.

#### CHROMOSOMAL LOCATION

Genetic locus: Usp26 (mouse) mapping to X A5.

#### SOURCE

USP26 (W-12) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the N-terminus of USP26 of mouse origin.

## PRODUCT

Each vial contains 200  $\mu g$  lgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-51013 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## **RESEARCH USE**

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

## APPLICATIONS

USP26 (W-12) is recommended for detection of Ubiquitin-specific Processing Protease 26 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).

Suitable for use as control antibody for USP26 siRNA (m): sc-61764, USP26 shRNA Plasmid (m): sc-61764-SH and USP26 shRNA (m) Lentiviral Particles: sc-61764-V.

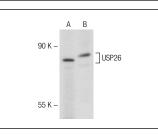
Molecular Weight observed of USP26: 83 kDa.

Positive Controls: Mouse liver extract: sc-2256 or rat epididymis tissue extracts.

#### **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<sup>™</sup> compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker<sup>™</sup> 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<sup>™</sup> Mounting Medium: sc-24941.

#### DATA



USP26 (W-12): sc-51013. Western blot analysis of USP26 expression in mouse liver (**A**) and rat epididymis (**B**) tissue extracts.

#### **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.