

USP18 (H-300): sc-98431

BACKGROUND

The ubiquitin (Ub) pathway involves three sequential enzymatic steps that facilitate the conjugation of Ub and Ub-like molecules to specific protein substrates. A wide range of enzymes facilitate the proteolytic Ub pathway, including the ubiquitin specific peptidase, USP18 (also designated interferon-stimulated gene 43 (ISG43), ISG15-specific-processing protease, Ubl carboxyl-terminal hydrolase 18 and Ubp43). USP18, a member of the peptidase C19 family, maintains a critical cellular balance of ISG15-conjugated proteins in stressed and healthy organisms. It can efficiently cleave ISG15 fusions including native ISG15 conjugates linked by isopeptide bonds. In mice, deletion of the USP18 gene leads to a large increase of ISG15 conjugates in tissues. USP18 expression is negatively regulated by RNase-L and induced by interferon.

REFERENCES

1. Liu, L.Q., et al. 1999. A novel ubiquitin-specific protease, UBP4 cloned from leukemia fusion protein AML1-ETO-expressing mice, functions in hematopoietic cell differentiation. *Mol. Cell. Biol.* 19: 3029-3038.
2. Schwer, H., et al. 2000. Cloning and characterization of a novel human ubiquitin-specific protease, a homologue of murine UBP43 (USP18). *Genomics* 65: 44-52.

CHROMOSOMAL LOCATION

Genetic locus: USP18 (human) mapping to 22q11.21; Usp18 (mouse) mapping to 6 F1.

SOURCE

USP18 (H-300) is a rabbit polyclonal antibody raised against amino acids 73-372 mapping at the C-terminus of USP18 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.

APPLICATIONS

USP18 (H-300) is recommended for detection of USP18 of mouse, rat and 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).

Suitable for use as control antibody for USP18 siRNA (h): sc-60865, USP18 siRNA (m): sc-60866, USP18 shRNA Plasmid (h): sc-60865-SH, USP18 shRNA Plasmid (m): sc-60866-SH, USP18 shRNA (h) Lentiviral Particles: sc-60865-V and USP18 shRNA (m) Lentiviral Particles: sc-60866-V.

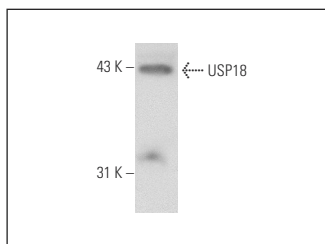
Molecular Weight of USP18: 43 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204.

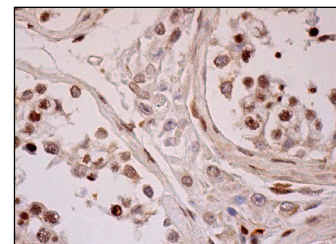
RECOMMENDED SECONDARY REAGENTS

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



USP18 (H-300): sc-98431. Western blot analysis of USP18 expression in Jurkat whole cell lysate.



USP18 (H-300): sc-98431. Immunoperoxidase staining of formalin fixed, paraffin-embedded human testis tissue showing nuclear staining of cells in seminiferous ducts and Leydig cells.

SELECT PRODUCT CITATIONS

1. Lin, Y.P., et al. 2010. Identification of early transcripts related to male development in chicken embryos. *Theriogenology* 74: 1161-1178.

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.

PROTOCOLS

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



Try **USP18 (E-5): sc-374064**, our highly recommended monoclonal alternative to USP18 (H-300).