

# USP44 (S-14): sc-79331

## BACKGROUND

The ubiquitin (Ub) pathway involves three sequential enzymatic steps that facilitate the conjugation of Ub and Ub-like molecules to specific protein substrates. Through the use of a wide range of enzymes that can add or remove ubiquitin, the Ub pathway controls many intracellular processes such as signal transduction, transcriptional activation and cell cycle progression. USP44 (ubiquitin specific peptidase 44) is a 712 amino acid protein that contains one UBP-type zinc finger and belongs to the peptidase C19 family. Expressed in testis, USP44, catalyzes the conversion of a ubiquitin C-terminal thioester to a free ubiquitin and a thiol. USP44 is encoded by a gene that maps to human chromosome 12, which encodes over 1,100 genes and comprises approximately 4.5% of the human genome.

## REFERENCES

1. Chung, C.H. and Baek, S.H. 1999. Deubiquitinating enzymes: their diversity and emerging roles. *Biochem. Biophys. Res. Commun.* 266: 633-640.
2. Puente, X.S., et al. 2003. Human and mouse proteases: a comparative genomic approach. *Nat. Rev. Genet.* 4: 544-558.
3. Quesada, V., et al. 2004. Cloning and enzymatic analysis of 22 novel human ubiquitin-specific proteases. *Biochem. Biophys. Res. Commun.* 314: 54-62.
4. Stegmeier, F., et al. 2007. Anaphase initiation is regulated by antagonistic ubiquitination and deubiquitination activities. *Nature* 446: 876-881.
5. Online Mendelian Inheritance in Man, OMIM™. 2007. Johns Hopkins University, Baltimore, MD. MIM Number: 610993. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>

## CHROMOSOMAL LOCATION

Genetic locus: USP44 (human) mapping to 12q22; Usp44 (mouse) mapping to 10 C2.

## SOURCE

USP44 (S-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of USP44 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.

Blocking peptide available for competition studies, sc-79331 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.

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.

## APPLICATIONS

USP44 (S-14) is recommended for detection of USP44 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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).

USP44 (S-14) is also recommended for detection of USP44 in additional species, including equine, porcine and avian.

Suitable for use as control antibody for USP44 siRNA (h): sc-76857, USP44 siRNA (m): sc-76858, USP44 shRNA Plasmid (h): sc-76857-SH, USP44 shRNA Plasmid (m): sc-76858-SH, USP44 shRNA (h) Lentiviral Particles: sc-76857-V and USP44 shRNA (m) Lentiviral Particles: sc-76858-V.

Molecular Weight of USP44: 81 kDa.

Positive Controls: Hep G2 cell lysate: sc-2227.

## 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) 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.

## SELECT PRODUCT CITATIONS

1. Zhang, Y., et al. 2012. USP44 regulates centrosome positioning to prevent aneuploidy and suppress tumorigenesis. *J. Clin. Invest.* 122: 4362-4374.

## RESEARCH USE

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



Try **USP44 (G-2): sc-377203**, our highly recommended monoclonal alternative to USP44 (S-14).