

USP22 (H-47): sc-292319

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. USP22 (ubiquitin specific peptidase 22), also known as USP3L, is a 525 amino acid protein that contains one UBP-type zinc-finger and functions to catalyze the conversion of a ubiquitin C-terminal thioester to free ubiquitin and thiol, a reaction that may influence several cellular processes. Via its catalytic activity, USP22 is thought to play an important role in cell cycle progression and may also serve as a cancer stem cell marker. The gene encoding USP22 maps to human chromosome 17, which comprises over 2.5% of the human genome and encodes over 1,200 genes.

REFERENCES

1. Kikuno, R., et al. 1999. Prediction of the coding sequences of unidentified human genes. XIV. The complete sequences of 100 new cDNA clones from brain which code for large proteins *in vitro*. DNA Res. 6: 197-205.
2. Lee, H.J., et al. 2006. The expression patterns of deubiquitinating enzymes, USP22 and Usp22. Gene Expr. Patterns 6: 277-284.
3. Zhang, X.Y., et al. 2008. USP22, an hSAGA subunit and potential cancer stem cell marker, reverses the polycomb-catalyzed ubiquitylation of Histone H2A. Cell Cycle 7: 1522-1524.
4. Zhao, Y., et al. 2008. A TFIIIC/STAGA module mediates Histone H2A and H2B deubiquitination, coactivates nuclear receptors and counteracts heterochromatin silencing. Mol. Cell 29: 92-101.
5. Zhang, X.Y., et al. 2008. The putative cancer stem cell marker USP22 is a subunit of the human SAGA complex required for activated transcription and cell-cycle progression. Mol. Cell 29: 102-111.
6. Online Mendelian Inheritance in Man, OMIM[™]. 2008. Johns Hopkins University, Baltimore, MD. MIM Number: 612116. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>

CHROMOSOMAL LOCATION

Genetic locus: USP22 (human) mapping to 17p11.2; Usp22 (mouse) mapping to 11 B2.

SOURCE

USP22 (H-47) is a rabbit polyclonal antibody raised against amino acids 130-176 mapping within an internal region of USP22 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

USP22 (H-47) is recommended for detection of USP22 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

USP22 (H-47) is also recommended for detection of USP22 in additional species, including equine, canine and bovine.

Suitable for use as control antibody for USP22 siRNA (h): sc-63195, USP22 siRNA (m): sc-63196, USP22 shRNA Plasmid (h): sc-63195-SH, USP22 shRNA Plasmid (m): sc-63196-SH, USP22 shRNA (h) Lentiviral Particles: sc-63195-V and USP22 shRNA (m) Lentiviral Particles: sc-63196-V.

Molecular Weight of USP22: 60 kDa.

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.

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 **USP22 (C-3): sc-390585**, our highly recommended monoclonal alternative to USP22 (H-47).