SANTA CRUZ BIOTECHNOLOGY, INC.

USP43 (K-17): sc-82398

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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. USP43 (ubiquitin specific peptidase 43), also known as deubiquitinating enzyme 43 or ubiquitin thioesterase 43, is a 1,124 amino acid protein belonging to the peptidase C19 family. USP43 hydrolyzes the peptide bond of C-terminal glycine of ubiquitin, and plays an important role in the processing of ubiquinated proteins and poly-ubiquitin precursors. Expressed at low levels in lung, aorta and brain, USP43 is encoded by a gene mapping to human chromosome 17p13.1. Three USP43 isoforms exist as a result of alternative splicing events.

REFERENCES

1. Fischer, J.A. 2003. Deubiquitinating enzymes: their roles in development, differentiation, and disease. Int. Rev. Cytol. 229: 43-72.
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. Kimura, K., et al. 2006. Diversification of transcriptional modulation: large-scale identification and characterization of putative alternative promoters of human genes. Genome Res. 16: 55-65.
5. Lehman, N.L. 2009. The ubiquitin proteasome system in neuropathology. Acta Neuropathol. 118: 329-347.
6. Ye, Y., et al. 2009. Dissection of USP catalytic domains reveals five common insertion points. Mol. Biosyst. 5: 1797-1808.

CHROMOSOMAL LOCATION

Genetic locus: USP43 (human) mapping to 17p13.1; Usp43 (mouse) mapping to 11 B3.

SOURCE

USP43 (K-17) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of USP43 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-82398 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.

APPLICATIONS

USP43 (K-17) is recommended for detection of USP43 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); non cross-reactive with other USP family members.

USP43 (K-17) is also recommended for detection of USP43 in additional species, including equine, bovine and porcine.

Suitable for use as control antibody for USP43 siRNA (h): sc-76855, USP43 siRNA (m): sc-76856, USP43 shRNA Plasmid (h): sc-76855-SH, USP43 shRNA Plasmid (m): sc-76856-SH, USP43 shRNA (h) Lentiviral Particles: sc-76855-V and USP43 shRNA (m) Lentiviral Particles: sc-76856-V.

Molecular Weight of USP43: 123 kDa.

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.

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.