USP36 (E-18): sc-82103

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. USP36 (ubiquitin specific peptidase 36), also known as DUB1, is a 1,121 amino acid protein that localizes to the nucleus and belongs to the peptidase C19 family. Expressed in a variety of tissues, USP36 functions to catalyze the conversion of a ubiquitin C-terminal thio ester to a free ubiquitin and a free thiol, an event that plays an important role in proteasome-mediated protein disposal. Two isoforms of USP36 exist due to alternative splicing events.

REFERENCES

1. Baek, K.H. 2002. Lymphocyte-specific murine deubiquitinating enzymes induced by cytokines. Am. J. Hematol. 71: 340-345.

2. Baek, K.H. 2003. Conjugation and deconjugation of ubiquitin regulating the destiny of proteins. Exp. Mol. Med. 35: 1-7.

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. Kim, M.S., et al. 2004. A novel cysteine protease HeLa DUB-1 responsible for cleaving the ubiquitin in human ovarian cancer cells. Int. J. Oncol. 25: 373-379.

5. Kim, M.S., et al. 2005. Deubiquitinating enzyme USP36 contains the PEST motif and is polyubiquitinated. Biochem. Biophys. Res. Commun. 330: 797-804.

6. Millard, S.M. and Wood, S.A. 2006. Riding the DUBway: regulation of protein trafficking by deubiquitylating enzymes. J. Cell Biol. 173: 463-468.

7. Nousiainen, M., et al. 2006. Phosphoproteome analysis of the human mitotic spindle. Proc. Natl. Acad. Sci. USA 103: 5391-5396.

CHROMOSOMAL LOCATION

Genetic locus: USP36 (human) mapping to 17q25.3; Usp36 (mouse) mapping to 11 E2.

SOURCE

USP36 (E-18) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of USP36 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-82103 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

USP36 (E-18) is recommended for detection of USP36 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.

USP36 (E-18) is also recommended for detection of USP36 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for USP36 siRNA (h): sc-76843, USP36 siRNA (m): sc-76844, USP36 shRNA Plasmid (h): sc-76843-SH, USP36 shRNA Plasmid (m): sc-76844-SH, USP36 shRNA (h) Lentiviral Particles: sc-76843-V and USP36 shRNA (m) Lentiviral Particles: sc-76844-V.

Molecular Weight of USP36: 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.