

USP13 (E-11): sc-514442

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. USP13 (ubiquitin specific peptidase 13), also known as ISOT3 (Isopeptidase T-3), is an 863 amino acid protein that belongs to the peptidase C19 family and contains one UBP-type zinc finger and 2 UBA domains. Highly expressed in testicular and ovarian tissue, USP13 functions to catalyze the water-dependent conversion of a ubiquitin C-terminal thioester to a thiol and a free ubiquitin.

REFERENCES

1. D'Andrea, A. and Pellman, D. 1998. Deubiquitinating enzymes: a new class of biological regulators. *Crit. Rev. Biochem. Mol. Biol.* 33: 337-352.
2. Timms, K.M., et al. 1998. The genomic organization of Isopeptidase T-3 (ISOT-3), a new member of the ubiquitin specific protease family (UBP). *Gene* 217: 101-106.
3. Online Mendelian Inheritance in Man, OMIM™. 1999. Johns Hopkins University, Baltimore, MD. MIM Number: 603591. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
4. Southan, C. 2001. A genomic perspective on human proteases. *FEBS Lett.* 498: 214-218.
5. Puente, X.S., et al. 2003. Human and mouse proteases: a comparative genomic approach. *Nat. Rev. Genet.* 4: 544-558.
6. Quesada, V., et al. 2004. Cloning and enzymatic analysis of 22 novel human ubiquitin-specific proteases. *Biochem. Biophys. Res. Commun.* 314: 54-62.
7. Catic, A., et al. 2007. Screen for ISG15-crossreactive deubiquitinases. *PLoS ONE* 2: e679.

CHROMOSOMAL LOCATION

Genetic locus: USP13 (human) mapping to 3q26.33; Usp13 (mouse) mapping to 3 A3.

SOURCE

USP13 (E-11) is a mouse monoclonal antibody raised against amino acids 71-195 mapping near the N-terminus of USP13 of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2a} kappa light chain 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.

RESEARCH USE

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

APPLICATIONS

USP13 (E-11) is recommended for detection of USP13 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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).

Suitable for use as control antibody for USP13 siRNA (h): sc-76815, USP13 siRNA (m): sc-76816, USP13 shRNA Plasmid (h): sc-76815-SH, USP13 shRNA Plasmid (m): sc-76816-SH, USP13 shRNA (h) Lentiviral Particles: sc-76815-V and USP13 shRNA (m) Lentiviral Particles: sc-76816-V.

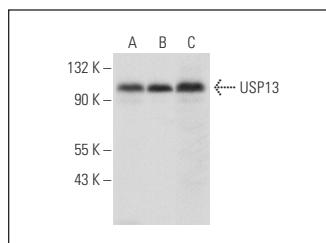
Molecular Weight of USP13: 97 kDa.

Positive Controls: SW480 cell lysate: sc-2219, Hep G2 cell lysate: sc-2227 or SH-SY5Y cell lysate: sc-3812.

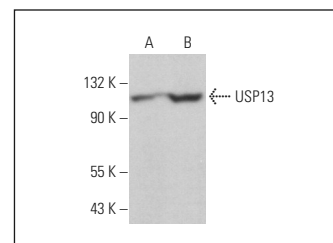
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), 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 m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



USP13 (E-11): sc-514442. Western blot analysis of USP13 expression in SW480 (A), SH-SY5Y (B) and Hep G2 (C) whole cell lysates.



USP13 (E-11): sc-514442. Western blot analysis of USP13 expression in SJRH30 (A) and Ramos (B) whole cell lysates.

PROTOCOLS

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