

# USP13 (D-11): sc-390316

## 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 two 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.

## CHROMOSOMAL LOCATION

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

## SOURCE

USP13 (D-11) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 161-199 within an internal region of USP13 of human origin.

## PRODUCT

Each vial contains 200 µg IgG<sub>1</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-390316 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

## STORAGE

Store at 4° C, **\*\*DO NOT FREEZE\*\***. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

## APPLICATIONS

USP13 (D-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).

USP13 (D-11) is also recommended for detection of USP13 in additional species, including equine, canine, bovine and porcine.

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.

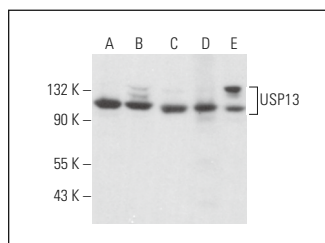
Molecular Weight of USP13: 97 kDa.

Positive Controls: SUP-T1 whole cell lysate: sc-364796, HeLa whole cell lysate: sc-2200 or Jurkat whole cell lysate: sc-2204.

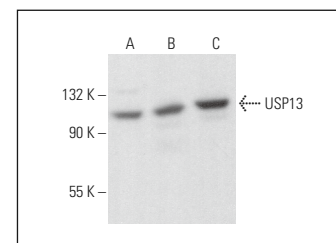
## RECOMMENDED SUPPORT REAGENTS

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, UltraCruz® Blocking Reagent: sc-516214 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 (D-11): sc-390316. Western blot analysis of USP13 expression in Jurkat (A), A-673 (B), MDA-MB-231 (C), Ramos (D) and Sol8 (E) whole cell lysates.



USP13 (D-11): sc-390316. Western blot analysis of USP13 expression in HeLa (A), Jurkat (B) and SUP-T1 (C) whole cell lysates.

## SELECT PRODUCT CITATIONS

- Xie, W., et al. 2020. Auto-ubiquitination of NEDD4-1 recruits USP13 to facilitate autophagy through deubiquitinating VPS34. *Cell Rep.* 30: 2807-2819.
- Shen, Y., et al. 2022. Methionine oxidation of CLK4 promotes the metabolic switch and redox homeostasis in esophageal carcinoma via inhibiting MITF selective autophagy. *Clin. Transl. Med.* 12: e719.

## RESEARCH USE

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

## PROTOCOLS

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