

USP44 (G-2): sc-377203

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. USP44 (ubiquitin specific peptidase 44) is a 712 amino acid protein that contains one UBP-type zinc finger and belongs to the peptidase C19 family. Expressed in testis, USP44, catalyzes the conversion of a ubiquitin C-terminal thioester to a free ubiquitin and a thiol. USP44 is encoded by a gene that maps to human chromosome 12, which encodes over 1,100 genes and comprises approximately 4.5% of the human genome.

CHROMOSOMAL LOCATION

Genetic locus: USP44 (human) mapping to 12q22; Usp44 (mouse) mapping to 10 C2.

SOURCE

USP44 (G-2) is a mouse monoclonal antibody raised against amino acids 133-240 mapping within an internal region of USP44 of mouse origin.

PRODUCT

Each vial contains 200 µg IgG_{2b} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

USP44 (G-2) is available conjugated to agarose (sc-377203 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-377203 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-377203 PE), fluorescein (sc-377203 FITC), Alexa Fluor® 488 (sc-377203 AF488), Alexa Fluor® 546 (sc-377203 AF546), Alexa Fluor® 594 (sc-377203 AF594) or Alexa Fluor® 647 (sc-377203 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-377203 AF680) or Alexa Fluor® 790 (sc-377203 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

RESEARCH USE

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

APPLICATIONS

USP44 (G-2) is recommended for detection of USP44 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 USP44 siRNA (h): sc-76857, USP44 siRNA (m): sc-76858, USP44 shRNA Plasmid (h): sc-76857-SH, USP44 shRNA Plasmid (m): sc-76858-SH, USP44 shRNA (h) Lentiviral Particles: sc-76857-V and USP44 shRNA (m) Lentiviral Particles: sc-76858-V.

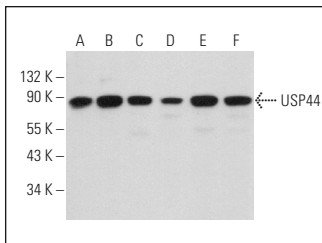
Molecular Weight of USP44: 81 kDa.

Positive Controls: A549 cell lysate: sc-2413, NTERA-2 cl.D1 whole cell lysate: sc-364181 or JAR cell lysate: sc-2276.

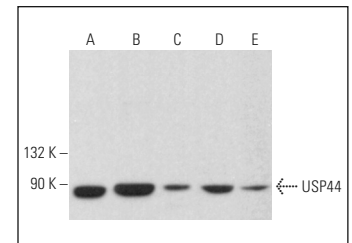
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BPHRP: sc-516102 or m-IgGκ BPHRP (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 BPFITC: sc-516140 or m-IgGκ BPE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



USP44 (G-2): sc-377203. Western blot analysis of USP44 expression in NTERA-2 cl.D1 (A), JAR (B), HeLa (C), Hep G2 (D), NIH/3T3 (E) and Jurkat (F) whole cell lysates.



USP44 (G-2): sc-377203. Western blot analysis of USP44 expression in NTERA-2 cl.D1 (A), A549 (B), MOLT-4 (C), F9 (D) and PC-12 (E) whole cell lysates.

SELECT PRODUCT CITATIONS

- Chen, S., et al. 2017. Histone H2B monoubiquitination is a critical epigenetic switch for the regulation of autophagy. *Nucleic Acids Res.* 45: 1144-1158.
- Park, J.M., et al. 2019. USP44 promotes the tumorigenesis of prostate cancer cells through EZH2 protein stabilization. *Mol. Cells* 42: 17-27.
- Oh, S., et al. 2020. The chromatin-binding protein PHF6 functions as an E3 ubiquitin ligase of H2BK120 via H2BK12Ac recognition for activation of trophoblast genes. *Nucleic Acids Res.* 48: 9037-9052.

STORAGE

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

PROTOCOLS

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

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