

USP25 (C-5): sc-398414

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. USP25 (ubiquitin specific peptidase 25), also known as USP21, is a 1,087 amino acid member of the peptidase C19 family. Expressed at high amounts in pancreas, kidney, skeletal muscle, testis, liver, heart, brain and lung, USP25 associates with the 26S Proteasome and functions as a deubiquitinating enzyme in the Ub proteolytic pathway. Due to alternative splicing events, USP25 is expressed as two short, ubiquitously expressed isoforms and one long, muscle-specific isoform. The long isoform of USP25 is upregulated in myogenesis and is implicated in the pathogenesis of severe myopathies.

CHROMOSOMAL LOCATION

Genetic locus: USP25 (human) mapping to 21q21.1; Usp25 (mouse) mapping to 16 C3.1.

SOURCE

USP25 (C-5) is a mouse monoclonal antibody raised against amino acids 851-990 mapping near the C-terminus of USP25 of human origin.

PRODUCT

Each vial contains 200 µg IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

USP25 (C-5) is available conjugated to agarose (sc-398414 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-398414 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-398414 PE), fluorescein (sc-398414 FITC), Alexa Fluor® 488 (sc-398414 AF488), Alexa Fluor® 546 (sc-398414 AF546), Alexa Fluor® 594 (sc-398414 AF594) or Alexa Fluor® 647 (sc-398414 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-398414 AF680) or Alexa Fluor® 790 (sc-398414 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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APPLICATIONS

USP25 (C-5) is recommended for detection of USP25 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 USP25 siRNA (h): sc-76829, USP25 siRNA (m): sc-76830, USP25 shRNA Plasmid (h): sc-76829-SH, USP25 shRNA Plasmid (m): sc-76830-SH, USP25 shRNA (h) Lentiviral Particles: sc-76829-V and USP25 shRNA (m) Lentiviral Particles: sc-76830-V.

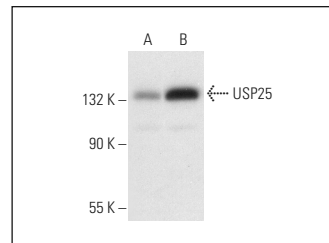
Molecular Weight of USP25: 126 kDa.

Positive Controls: MIA PaCa-2 cell lysate: sc-2285 or NTERA-2 cl.D1 whole cell lysate: sc-364181.

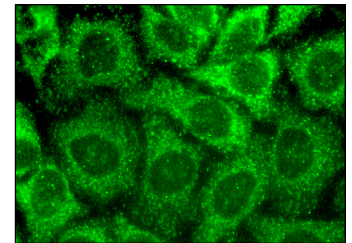
RECOMMENDED SUPPORT REAGENTS

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



USP25 (C-5): sc-398414. Western blot analysis of USP25 expression in NTERA-2 cl.D1 (A) and MIA PaCa-2 (B) whole cell lysates.



USP25 (C-5): sc-398414. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic localization.

SELECT PRODUCT CITATIONS

- Qian, G., et al. 2018. Smurf1 restricts the antiviral function mediated by USP25 through promoting its ubiquitination and degradation. *Biochem. Biophys. Res. Commun.* 498: 537-543.
- Long, C., et al. 2018. LPS promotes HBO1 stability via USP25 to modulate inflammatory gene transcription in THP-1 cells. *Biochim. Biophys. Acta Gene Regul. Mech.* 1861: 773-782.
- Long, C., et al. 2020. Cigarette smoke extract modulates *Pseudomonas aeruginosa* bacterial load via USP25/HDAC11 axis in lung epithelial cells. *Am. J. Physiol. Lung Cell. Mol. Physiol.* 318: L252-L263.

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.

PROTOCOLS

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