

# USP32 (A-10): sc-374465

## 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. USP32 (ubiquitin specific peptidase 32), also known as NY-REN-60, is a 1,604 amino acid protein that contains one DUSP domain and three EF-hand calcium binding domains. Localized to membranes in a lipid-anchored fashion and expressed in all normal tissues, USP32 catalyzes the conversion of a ubiquitin C-terminal thioester to a free ubiquitin and a thiol, a reaction that may influence several cellular processes.

## CHROMOSOMAL LOCATION

Genetic locus: USP32 (human) mapping to 17q23.1; Usp32 (mouse) mapping to 11 C.

## SOURCE

USP32 (A-10) is a mouse monoclonal antibody raised against amino acids 361-660 mapping within an internal region of USP32 of human origin.

## PRODUCT

Each vial contains 200 µg IgG<sub>2b</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

USP32 (A-10) is available conjugated to agarose (sc-374465 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-374465 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-374465 PE), fluorescein (sc-374465 FITC), Alexa Fluor® 488 (sc-374465 AF488), Alexa Fluor® 546 (sc-374465 AF546), Alexa Fluor® 594 (sc-374465 AF594) or Alexa Fluor® 647 (sc-374465 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-374465 AF680) or Alexa Fluor® 790 (sc-374465 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Alexa Fluor® is a trademark of Molecular Probes, Inc., Oregon, USA

## APPLICATIONS

USP32 (A-10) is recommended for detection of USP32 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 USP32 siRNA (h): sc-106678, USP32 siRNA (m): sc-106679, USP32 shRNA Plasmid (h): sc-106678-SH, USP32 shRNA Plasmid (m): sc-106679-SH, USP32 shRNA (h) Lentiviral Particles: sc-106678-V and USP32 shRNA (m) Lentiviral Particles: sc-106679-V.

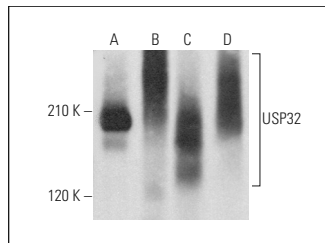
Molecular Weight of USP32: 182 kDa.

Positive Controls: NIH/3T3 whole cell lysate: sc-2210, PC-3 cell lysate: sc-2220 or MCF7 whole cell lysate: sc-2206.

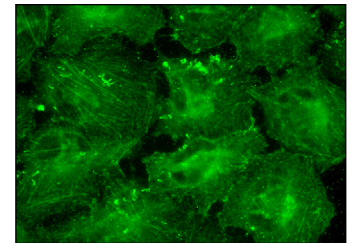
## RECOMMENDED SUPPORT REAGENTS

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



USP32 (A-10): sc-374465. Western blot analysis of USP32 expression in MCF7 (A), PC-3 (B), NIH/3T3 (C) and C6 (D) whole cell lysates.



USP32 (A-10): sc-374465. Immunofluorescence staining of methanol-fixed HeLa cells showing membrane localization.

## SELECT PRODUCT CITATIONS

- 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.
- Sapmaz, A., et al. 2019. USP32 regulates late endosomal transport and recycling through deubiquitylation of Rab7. *Nat. Commun.* 10: 1454.
- Dou, N., et al. 2020. USP32 promotes tumorigenesis and chemoresistance in gastric carcinoma via upregulation of SMAD2. *Int. J. Biol. Sci.* 16: 1648-1657.
- Benedetti, R., et al. 2021. Regulatory interplay between miR-181a-5p and estrogen receptor signaling cascade in breast cancer. *Cancers* 13: 543.

## 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](http://www.scbt.com) for detailed protocols and support products.