

# USP22 (C-3): sc-390585

## 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. USP22 (ubiquitin specific peptidase 22), also known as USP3L, is a 525 amino acid protein that contains one UBP-type zinc finger and functions to catalyze the conversion of a ubiquitin C-terminal thioester to free ubiquitin and thiol, a reaction that may influence several cellular processes. Via its catalytic activity, USP22 is thought to play an important role in cell cycle progression and may also serve as a cancer stem cell marker. The gene encoding USP22 maps to human chromosome 17, which comprises over 2.5% of the human genome and encodes over 1,200 genes.

## CHROMOSOMAL LOCATION

Genetic locus: USP22 (human) mapping to 17p11.2; Usp22 (mouse) mapping to 11 B2.

## SOURCE

USP22 (C-3) is a mouse monoclonal antibody raised against amino acids 130-176 mapping within an internal region of USP22 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.

USP22 (C-3) is available conjugated to agarose (sc-390585 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-390585 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-390585 PE), fluorescein (sc-390585 FITC), Alexa Fluor® 488 (sc-390585 AF488), Alexa Fluor® 546 (sc-390585 AF546), Alexa Fluor® 594 (sc-390585 AF594) or Alexa Fluor® 647 (sc-390585 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-390585 AF680) or Alexa Fluor® 790 (sc-390585 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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## APPLICATIONS

USP22 (C-3) is recommended for detection of USP22 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).

USP22 (C-3) is also recommended for detection of USP22 in additional species, including equine, canine and bovine.

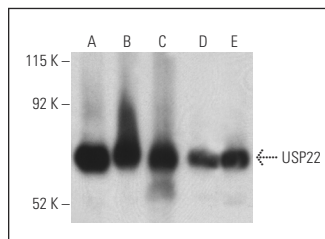
Suitable for use as control antibody for USP22 siRNA (h): sc-63195, USP22 siRNA (m): sc-63196, USP22 shRNA Plasmid (h): sc-63195-SH, USP22 shRNA Plasmid (m): sc-63196-SH, USP22 shRNA (h) Lentiviral Particles: sc-63195-V and USP22 shRNA (m) Lentiviral Particles: sc-63196-V.

Molecular Weight of USP22: 60 kDa.

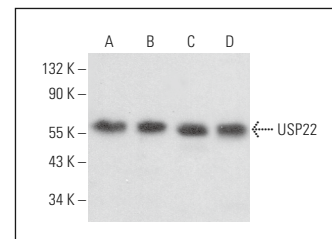
## STORAGE

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

## DATA



USP22 (C-3): sc-390585. Western blot analysis of USP22 expression in Jurkat (A), HeLa (B), Caco-2 (C), Ca Ski (D) and AMJ2-C8 (E) whole cell lysates. Detection reagent used: m-IgG<sub>1</sub> BP-HRP: sc-525408.



USP22 (C-3): sc-390585. Western blot analysis of USP22 expression in C6 (A), EOC 20 (B), Ca Ski (C) and AMJ2-C8 (D) whole cell lysates.

## SELECT PRODUCT CITATIONS

- Kosinsky, R.L., et al. 2015. USP22 deficiency impairs intestinal epithelial lineage specification *in vivo*. *Oncotarget* 6: 37906-37918.
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- Wei, Y., et al. 2021. USP22 promotes melanoma and BRAF inhibitor resistance via YAP stabilization. *Oncol. Lett.* 21: 394.
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- Herbst, D.A., et al. 2021. Structure of the human SAGA coactivator complex. *Nat. Struct. Mol. Biol.* 28: 989-996.
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- Xu, H., et al. 2022. LncRNA MALAT1 regulates USP22 expression through EZH2-mediated H3K27me3 modification to accentuate sepsis-induced myocardial dysfunction. *Cardiovasc. Toxicol.* 22: 813-830.
- Chen, T., et al. 2022. Long intergenic noncoding RNA00265 enhances cell viability and metastasis via targeting miR-485-5p/USP22 axis in osteosarcoma. *Front. Oncol.* 12: 907472.

## RESEARCH USE

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