

# USP11 (C-6): sc-365528

## 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. USP11 (ubiquitin specific peptidase 11), also known as UHX1, is a 920 amino acid deubiquitinating enzyme that participates in the Ub pathway. Localized to the nucleus, USP11 associates with both Ran BP-M (Ran binding protein-M) and with the tumor suppressor BRCA2. Through these associations, USP11 functions to either inhibit ubiquitination of these proteins or to remove ubiquitin residues that have already been attached to these proteins. USP11 is implicated in several X-linked retinal diseases and, due to its ability to deubiquitinate BRCA2, may play a role in tumor suppression.

## CHROMOSOMAL LOCATION

Genetic locus: USP11 (human) mapping to Xp11.23; Usp11 (mouse) mapping to X A1.3.

## SOURCE

USP11 (C-6) is a mouse monoclonal antibody raised against amino acids 661-740 mapping within an internal region of USP11 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.

USP11 (C-6) is available conjugated to agarose (sc-365528 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-365528 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-365528 PE), fluorescein (sc-365528 FITC), Alexa Fluor® 488 (sc-365528 AF488), Alexa Fluor® 546 (sc-365528 AF546), Alexa Fluor® 594 (sc-365528 AF594) or Alexa Fluor® 647 (sc-365528 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-365528 AF680) or Alexa Fluor® 790 (sc-365528 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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## APPLICATIONS

USP11 (C-6) is recommended for detection of USP11 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 USP11 siRNA (h): sc-63193, USP11 siRNA (m): sc-63194, USP11 shRNA Plasmid (h): sc-63193-SH, USP11 shRNA Plasmid (m): sc-63194-SH, USP11 shRNA (h) Lentiviral Particles: sc-63193-V and USP11 shRNA (m) Lentiviral Particles: sc-63194-V.

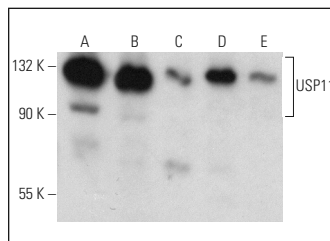
Molecular Weight of USP11: 110 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204, SK-N-MC cell lysate: sc-2237 or NIH/3T3 whole cell lysate: sc-2210.

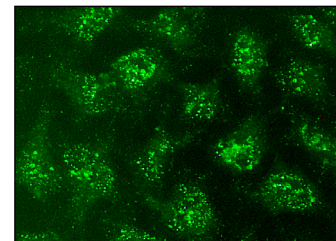
## STORAGE

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

## DATA



USP11 (C-6): sc-365528. Western blot analysis of USP11 expression in Jurkat (A), SK-N-MC (B), NIH/3T3 (C), Neuro-2A (D) and C6 (E) whole cell lysates.



USP11 (C-6): sc-365528. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic and nuclear localization.

## SELECT PRODUCT CITATIONS

- Lee, E.W., et al. 2015. USP11-dependent selective cIAP2 deubiquitylation and stabilization determine sensitivity to Smac mimetics. *Cell Death Differ.* 22: 1463-1476.
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- Li, F., et al. 2019. The deubiquitinase OTUD5 regulates Ku80 stability and non-homologous end joining. *Cell. Mol. Life Sci.* 76: 3861-3873.
- Feng, P., et al. 2021. The regulation of NONO by USP11 via deubiquitination is linked to the proliferation of melanoma cells. *J. Cell. Mol. Med.* 25: 1507-1517.
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- Kaushal, K., et al. 2022. Genome-wide CRISPR/Cas9-based screening for deubiquitinase subfamily identifies ubiquitin-specific protease 11 as a novel regulator of osteogenic differentiation. *Int. J. Mol. Sci.* 23: 856.
- Li, L., et al. 2022. ERK-mediated cytoplasmic retention of USP11 contributes to breast cancer cell proliferation by stabilizing cytoplasmic p21. *Int. J. Biol. Sci.* 18: 2568-2582.
- Yan, Y., et al. 2022. X-linked ubiquitin-specific peptidase 11 increases tauopathy vulnerability in women. *Cell* 185: 3913-3930.e19.
- Jin, Q., et al. 2022. Oncogenic deubiquitination controls tyrosine kinase signaling and therapy response in acute lymphoblastic leukemia. *Sci. Adv.* 8: eabq8437.
- Fang, Y., et al. 2023. USP11 exacerbates neuronal apoptosis after traumatic brain injury via PKM2-mediated PI3K/AKT signaling pathway. *Brain Res.* 1807: 148321.

## RESEARCH USE

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