

UFSP2 (G-11): sc-376084

BACKGROUND

UFM1 (ubiquitin-fold modifier 1) is a ubiquitin-like protein that is conjugated to target proteins by UBA5, an E1-like activating enzyme, and Ufc1, an E2-like conjugating enzyme. Through these interactions, UFM1 conjugates to target proteins by a covalent linkage. UFSP2 (UFM1-specific protease 2) is a 469 amino acid thiol protease that specifically cleaves UFM1 precursor and leads to exposure of its conserved C-terminal glycine, a step required prior to conjugation to target proteins. UFSP2 is also capable of releasing UFM1 from UFM1-conjugated cellular proteins. The gene encoding UFSP2 maps to human chromosome 4, which houses nearly 6% of the human genome and has the largest gene deserts (regions of the genome with no protein encoding genes) of all of the human chromosomes. Defects in some of the genes located on chromosome 4 are associated with Huntington's disease, Ellis-van Creveld syndrome, methylmalonic acidemia and polycystic kidney disease.

CHROMOSOMAL LOCATION

Genetic locus: UFSP2 (human) mapping to 4q35.1; Ufsp2 (mouse) mapping to 8 B1.1.

SOURCE

UFSP2 (G-11) is a mouse monoclonal antibody raised against amino acids 155-340 mapping within an internal region of UFSP2 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.

UFSP2 (G-11) is available conjugated to agarose (sc-376084 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-376084 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-376084 PE), fluorescein (sc-376084 FITC), Alexa Fluor® 488 (sc-376084 AF488), Alexa Fluor® 546 (sc-376084 AF546), Alexa Fluor® 594 (sc-376084 AF594) or Alexa Fluor® 647 (sc-376084 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-376084 AF680) or Alexa Fluor® 790 (sc-376084 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

UFSP2 (G-11) is recommended for detection of UFSP2 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), immunohistochemistry (including paraffin-embedded sections) (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 UFSP2 siRNA (h): sc-89115, UFSP2 siRNA (m): sc-154893, UFSP2 shRNA Plasmid (h): sc-89115-SH, UFSP2 shRNA Plasmid (m): sc-154893-SH, UFSP2 shRNA (h) Lentiviral Particles: sc-89115-V and UFSP2 shRNA (m) Lentiviral Particles: sc-154893-V.

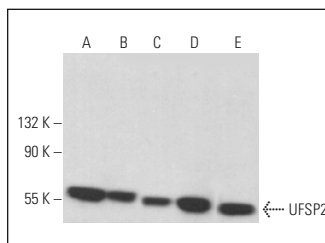
Molecular Weight of UFSP2: 53 kDa.

Positive Controls: SJRH30 cell lysate: sc-2287, 3T3-L1 cell lysate: sc-2243 or KNRK whole cell lysate: sc-2214.

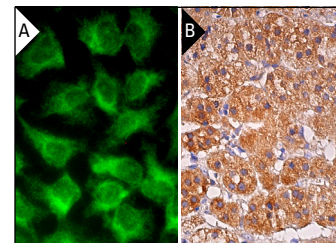
RECOMMENDED SUPPORT REAGENTS

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. 4) Immunohistochemistry: use m-IgGκ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



UFSP2 (G-11): sc-376084. Western blot analysis of UFSP2 expression in SJRH30 (A), HeLa (B), L6 (C), KNRK (D) and 3T3-L1 (E) whole cell lysates.



UFSP2 (G-11): sc-376084. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic localization (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human adrenal gland tissue showing cytoplasmic staining of glandular cells (B).

SELECT PRODUCT CITATIONS

- Wang, T., et al. 2017. Gene essentiality profiling reveals gene networks and synthetic lethal interactions with oncogenic Ras. *Cell* 168: 890-903.e15.
- Liang, J.R., et al. 2020. A genome-wide ER-phagy screen highlights key roles of mitochondrial metabolism and ER-resident UFMylation. *180: 1160-1177.e20.*
- Kulsuptrakul, J., et al. 2021. A genome-wide CRISPR screen identifies UFMylation and TRAMP-like complexes as host factors required for hepatitis A virus infection. *Cell Rep.* 34: 108859.

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.

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