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. UFSP1 (Ufm1-specific protease 1) is a 142 amino acid thiol protease that cleaves UFM1 precursor and leads to exposure of its conserved C-terminal glycine, a step required prior to conjugation to target proteins. UFSP1 is also capable of releasing UFM1 from UFM1-conjugated cellular proteins. The gene encoding UFSP1 maps to human chromosome 7, which houses over 1,000 genes and comprises nearly 5% of the human genome. Defects in genes localized to chromosome 7 have been linked to osteogenesis imperfecta, Williams-Beuren syndrome, Pendred syndrome, lissencephaly, citrullinemia and Shwachman-Diamond syndrome.

REFERENCES


CHROMOSOMAL LOCATION

Genetic locus: UFSP1 (human) mapping to 7q22.1; Ufsp1 (mouse) mapping to 5 G2.

SOURCE

UFSP1 (H-3) is a mouse monoclonal antibody raised against amino acids 4-57 mapping near the N-terminus of UFSP1 of human origin.

PRODUCT

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

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.

APPLICATIONS

UFSP1 (H-3) is recommended for detection of UFSP1 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 UFSP1 siRNA (h): sc-89334, UFSP1 siRNA (m): sc-154892, UFSP1 shRNA Plasmid (h): sc-89334-SH, UFSP1 shRNA Plasmid (m): sc-154892-SH, UFSP1 shRNA (h) Lentiviral Particles: sc-89334-V and UFSP1 shRNA (m) Lentiviral Particles: sc-154892-V.

Molecular Weight of UFSP1: 15 kDa.

Positive Controls: UFSP1 (m): 293T Lysate: sc-124445.

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended:

DATA

UFSP1 (H-3): sc-398577. Western blot analysis of UFSP1 expression in non-transfected: sc-117752 (A) and mouse UFSP1 transfected: sc-124445 (B) 293T whole cell lysates.

PROTOCOLS

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