

UFD1 (C-20): sc-9296

BACKGROUND

Ubiquitin-mediated proteolysis requires the transfer of ubiquitin (Ub) to lysine groups on selected cellular proteins, which then potentiates the proteolytic degradation of these protein conjugates by the 26S proteasome. Ub-fusions are cleaved by Ub-specific processing proteases (UBPs) or alternatively by the Ub-fusion degradation (UFD) pathway. The UBP pathway targets the C-terminal glycine residue on Ub that is involved in the formation of Ub-conjugates, while UFD proteins preferentially cleave Ub-conjugated proteins that contain an amino acid substitution at this glycine residue. The UFD1 protein was originally characterized in the yeast *S. cerevisiae* and subsequently, the human homolog UFD1 (or UFD1L) was identified. *In vitro*, UFD1 attenuates the degradation of Ub-fusions, which have a proline or valine residue substituted at the Gly 76 moiety, by the selective multiubiquitination of the Ub chain of the Ub-conjugate. Mutations within the UFD1 gene are implicated in the development of CATCH22 syndrome, which is characterized by cardiac defects, cleft palate and hypocalcemia, suggesting that this proteolytic pathway may be involved in the progression of these developmental defects.

CHROMOSOMAL LOCATION

Genetic locus: UFD1L (human) mapping to 22q11.2; Ufd1l (mouse) mapping to 16 A3.

SOURCE

UFD1 (C-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of UFD1 of human origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-9296 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

UFD1 (C-20) is recommended for detection of UFD1 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, 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).

UFD1 (C-20) is also recommended for detection of UFD1 in additional species, including equine, canine, porcine and avian.

Suitable for use as control antibody for UFD1 siRNA (h): sc-41689, UFD1 siRNA (m): sc-41690, UFD1 shRNA Plasmid (h): sc-41689-SH, UFD1 shRNA Plasmid (m): sc-41690-SH, UFD1 shRNA (h) Lentiviral Particles: sc-41689-V and UFD1 shRNA (m) Lentiviral Particles: sc-41690-V.

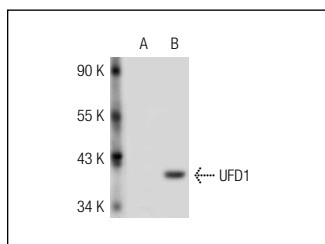
Molecular Weight of UFD1: 40 kDa.

Positive Controls: UFD1 (m): 293T Lysate: sc-124444 or HeLa whole cell lysate: sc-2200.

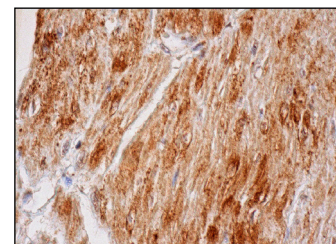
RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 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 donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941. 4) Immunohistochemistry: use ImmunoCruz™: sc-2053 or ABC: sc-2023 goat IgG Staining Systems.

DATA



UFD1 (C-20): sc-9296. Western blot analysis of UFD1 expression in non-transfected: sc-117752 (A) and mouse UFD1 transfected: sc-124444 (B) 293T whole cell lysates.



UFD1 (C-20): sc-9296. Immunoperoxidase staining of formalin fixed, paraffin-embedded human smooth muscle tissue showing cytoplasmic and nuclear staining of smooth muscle cells.

SELECT PRODUCT CITATIONS

- Lin, P.H., et al. 2008. Ubiquitin-proteasome system mediates heme oxygenase-1 degradation through endoplasmic reticulum-associated degradation pathway. *Biochim. Biophys. Acta* 1783: 1826-1834.

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 or our catalog for detailed protocols and support products.

MONOS
Satisfaction
Guaranteed

Try **UFD1 (B-7): sc-377265** or **UFD1 (E-9): sc-377222**, our highly recommended monoclonal alternatives to UFD1 (C-20).