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INTERNATIONAL

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New Item

New Item

Antibodies to Cell Cycle and Endocytosis targets

Ubiquitin fusion degradation 1-like (UFD1L) antibodies (Cat # UFD1L-101AP, P-UFD1L and PC-UFD1L)

Other Nomenclature:

The U box is a domain of approximately 70 amino acids that is present in proteins from yeast to humans. The prototype U box protein, yeast Ufd2, was identified as a ubiquitin chain assembly factor that cooperates with a ubiquitin-activating enzymes (E1, E2), and a ubiquitin-protein ligase (E3) to catalyze ubiquitin chain formation on artificial substrates. UFD1L is an essential component of the ubiquitin-dependent proteolytic pathway which degrades ubiquitin fusion proteins. The ternary complex containing UFD1L, VCP and NPLOC4 binds ubiquitinated proteins and is necessary for the export of misfolded proteins from the ER to the cytoplasm, where they are degraded by the proteosome. In mammalian cells the membrane bound ubiquitin ligase gp75 promotes degradation of sterol regulated degradation of HMG CoA reductase and misfolded endoplasmic reticulum proteins. The ubiquitin fusion degradation 1 like (UFD1L) protein plays a critical role in ER associated degradation in association with Npl4 and VCP proteins. Interaction of VCP-UFD1L-Npl4 complex recognizes polyubiquitin chains and transfers the ubiquitinated proteins to proteosomes. The UFD1L also directly interacts with membrane bound gp75 as a cofactor and accelerate the ubiquitination and degradation of reductase and eventually promotes receptor mediated uptake of low density lipoproteins, thus plays an important role in cholesterol metabolism (1). It is shown that UFD1L-Npl4 complex is a negative regulator of retrotranslocation of A1 chain of the cholera toxin (CT) to the cytosol across the ER, delaying the retro-translocation of ERAD substrates independently of its association with VCP (2). The NPLOC4-UFD1L-VCP complex regulates spindle disassembly at the end of mitosis and is necessary for the formation of a closed nuclear envelope. It may be involved in the development of some ectoderm-derived structures.

UFD1L gene is located on chromosome22q1.2 and is expressed during embryogenesis in the eyes and in the linear ear primordial. UFD1L gene is expressed in patients with DiGeorge (DGS) and velo-cardial facial (VCF) syndrome which suggest that proteolytic pathways that recognize ubiquitin fusion proteins for degrradtioin is conserved in vertebrates and UFD1L gene hemizygosity is the cause of some of the CATCH-22 (acronym for cardiac defects, abnormal facies, thymic hypoplasia, cleft palate and hypocalcimea) associated developmental defects in DGS and VCSF syndromes (3). UFD1L is expressed in adult heart, skeletal muscle and pancreas, and in fetal liver and kidney. UFD1L is a 307 amino acid protein apparent MW is 38kDa.

FabGennix has made and characterized a rabbit antibody against UFD1Lprotein. The UFD1L antibodies are affinity purified over immobilized affinity matrix and stabilized in the presence of preservatives for long-term storage. UFD1L-FITC conjugated antibody was further purified to remove un-conjugated fluorophore was stabilized for long-term storage. FabGennix will conjugate this antibody to secondary enzymes (alkaline phosphatase or horseradish peroxidase) and other fluorophores upon request at a nominal charge. FabGennix Int. Inc. stocks limited quantities of western blot positive controls for UFD1L in ready-to-use buffers and antigenic blocking protein/peptide for immuno-depletion assays of UFD1L-101AP antibody. FabGennix Int. Inc., has a wide range of antibodies and reagents for biomedical research community. For a complete listing please visit www. FabGenix.Com.

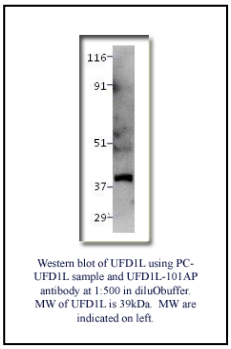
Catalog #	Host Species	Nature	Cross reactivity	Quantity	Vol
UFD1L-101AP	Rabbit	Affinity purifed UFD1L antibodies	R, M, H	100 ug	200ul
UFD1L-FITC	Rabbit	FITC-copnjugated UFD1L antibody	R, M, H	100ug	200ul
P-UFD1L	n/a	Antigenic blocking peptide for UFD1L-101AP	n/a	250ug	100ul
PC-UFD1L	n/a	Western blot postive control for UFD1L	5 applications	inquire	150ul

R = rat; M = mouse; H = human; C = chicken; monk = monkey ; * not all variants are labeled equally

Immunogen: 20kDa purified UFD1L protein was used to generate anti-UFD1L antibodies in rabbit.

Concentration: UFD1L-101AP Ig concentration 0.55-0.68 mg/ml in antibody stabilization buffer containing preservatives and stabilizing proteins.

Applications: Antibody UFD1L-101AP is ideal for IMM/WB applications for detection of endogenous UFD1L protein in various cell lines an dtissues including rat muscle. The dilutions for this antibody is for reference only, investigators are expected to determine the optimal conditions. Laboratory. Western blotting: > 1:250; IMM: Immunprecipitation1:200 recommended; IHC = nd. Investigators who want to use this antibody in applications not listed here can ask for a complimentary sample of UFD1L antibodies. We will be happy to provide this antibody form multiple rabbits.



Western blot of UFD1L using PC-UFD1L sample and UFD1L-101AP antibody at 1:500 in diluObuffer. MW of UFD1L is 39kDa. MW are indicated on left.

Reactivity: This antibody detects UFD1L in PC-UFD1L at 38kDa. The antibody also labels a lower MW protein (26kDa) in heart and skeletal muscle probably represents either an uncharacterized variant of UFD1L or an un known protein cross reacts to this antibody. Further experiments are needed to address these possibilities.

Protocols: Standard protocol for various applications (WB; IMM and IHC) of this antibody is provided with the product specification sheet, however, FabGennix Inc. strongly recommends investigators to optimize conditions for use of this antibody in their laboratories.

Notes: Briefly centrifuge to collect liquid before opening the vial, heat the PC-UFD1L tube in 90oC water bath for 1-2 minutes to dissolve any precipitate before use. This product is "ready-to-use" for electrophoresis.

Note: Now you can recycle your western blots (nitrocellulose, supported membranes and PVFD membranes) by using our StripObuffer (Cat FGI-1989). Each stripping is guaranteed to give better signal (up to 8 stripping). No strong pungent smell of reducing agents or heating is required.

Form/Storage: The antiserum is supplied in antibody stabilization buffer with 0.02% sodium azide as preservatives. The affinity-purified antibodies are purified on antigen-speharose affinity column and supplied as stabilized antibody. For long-term storage of antibodies, store at -20^{o}C. FabGennix Inc. does not recommend storage of very dilute antibody solutions unless they are prepared in specially formulated multi use antibody dilution buffer (Cat # DiluOBuffer). Working solutions of antibodies in DiluOBuffer should be filtered through 0.45 filter after every use for long-term storage.

References:

1. Cao J, Wang J, Qi W, Miao HH, Wang J, Ge L, DeBose-Boyd RA, Tang JJ, Li BL, Song BL. Cell Metab. 2007 Aug;6(2):115-28.
2. .McConnell E, Lass A, Wójcik C. Biochem Biophys Res Commun. 2007 Apr 20;355(4):1087-90.
3. Pizzuti A, Novelli G, Ratti A, Amati F, Mari A, Calabrese G, Nicolis S, Silani V, Marino B, Scarlato G, Ottolenghi S, Dallapiccola B. Hum Mol Genet. 1997 Feb;6(2):259-65.

For users who may require large amounts of UFD1L-101AP, please enquire about bulk material discounts.
This Product is for Research Use Only and is NOT intended for use in humans or clinical diagnosis.

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