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SYVN1 (HRD1) Antibody (N-term)

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP2184b

Product Information

Application	WB, E
Primary Accession	Q86TM6
Other Accession	Q5XHH7, Q6NRL6, Q9DBY1, Q8N6E8
Reactivity	Human, Mouse
Predicted	Mouse, Xenopus, Rat, Bovine, Canine, Rabbit, Chicken
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Calculated MW	67685
Antigen Region	58-88

Additional Information

Gene ID	84447
Other Names	E3 ubiquitin-protein ligase synoviolin, 632-, Synovial apoptosis inhibitor 1, SYVN1, HRD1, KIAA1810
Target/Specificity	This SYVN1 (HRD1) antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 58-88 amino acids from the N-terminal region of human SYVN1 (HRD1).
Dilution	WB~~1:1000 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is prepared by Saturated Ammonium Sulfate (SAS) precipitation followed by dialysis against PBS.
Storage	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	SYVN1 (HRD1) Antibody (N-term) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	SYVN1 {ECO:0000303|PubMed:15489334}
Function	E3 ubiquitin-protein ligase which accepts ubiquitin specifically from endoplasmic reticulum-associated UBC7 E2 ligase and transfers it to substrates, promoting their degradation (PubMed:12459480,

PubMed:12646171, PubMed:12975321, PubMed:14593114, PubMed:16289116, PubMed:16847254, PubMed:17059562, PubMed:17141218, PubMed:17170702, PubMed:22607976, PubMed:27827840, PubMed:26471130, PubMed:28827405). Component of the endoplasmic reticulum quality control (ERQC) system also called ER-associated degradation (ERAD) involved in ubiquitin-dependent degradation of misfolded endoplasmic reticulum proteins (PubMed:12459480, PubMed:12646171, PubMed:12975321, PubMed:14593114, PubMed:16289116, PubMed:16847254, PubMed:17059562, PubMed:17141218, PubMed:17170702, PubMed:22607976, PubMed:26471130, PubMed:28842558). Also promotes the degradation of normal but naturally short-lived proteins such as SGK. Protects cells from ER stress-induced apoptosis. Protects neurons from apoptosis induced by polyglutamine- expanded huntingtin (HTT) or unfolded GPR37 by promoting their degradation (PubMed:17141218). Sequesters p53/TP53 in the cytoplasm and promotes its degradation, thereby negatively regulating its biological function in transcription, cell cycle regulation and apoptosis (PubMed:17170702). Mediates the ubiquitination and subsequent degradation of cytoplasmic NFE2L1 (By similarity). During the early stage of B cell development, required for degradation of the pre-B cell receptor (pre-BCR) complex, hence supporting further differentiation into mature B cells (By similarity).

Cellular Location Endoplasmic reticulum membrane; Multi-pass membrane protein

Tissue Location Ubiquitously expressed, with highest levels in liver and kidney (at protein level). Up-regulated in synovial tissues from patients with rheumatoid arthritis (at protein level)

Background

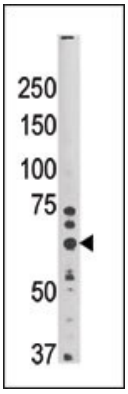
HRD1 is a ubiquitin ligase whose expression is induced by the unfolded protein response (UPR) following endoplasmic reticulum stress. Expression of HRD1 protects cells from apoptosis by inducing degradation of abnormally processed proteins that accumulate in the endoplasmic reticulum. HRD1 is expressed in many tissues, strongly expressed in brain, pancreas, liver, kidney and skeletal muscle. Synoviolin/Hrd1 (expressed in rheumatoid synovium) is reported to be a novel causative factor for arthropathy by triggering synovial cell outgrowth through its antiapoptotic effects. HRD1 contains one ring-type zinc finger.

References

Kikkert, M., et al., J. Biol. Chem. 279(5):3525-3534 (2004). Amano, T., et al., Genes Dev. 17(19):2436-2449 (2003). Nadav, E., et al., Biochem. Biophys. Res. Commun. 303(1):91-97 (2003). Kaneko, M., et al., FEBS Lett. 532 (1-2), 147-152 (2002) (): ().

Images

Western blot analysis of anti-HRD1 Pab (Cat. #AP2184b) in mouse brain tissue lysate (35ug/lane). HRD1(arrow) was detected using the purified Pab.



Citations

- Cutting Edge: Selective role of ubiquitin in MHC class I antigen presentation.
- Dual role of ancient ubiquitous protein 1 (AUP1) in lipid droplet accumulation and endoplasmic reticulum (ER) protein quality control.
- Activating transcription factor 6 limits intracellular accumulation of mutant □±(1)-antitrypsin Z and mitochondrial damage in hepatoma cells.

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