10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

# HRD1 Antibody (N-term)

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP2184e

## Product Information

| | |
|---|---|
| **Application** | WB, E |
| **Primary Accession** | Q86TM6 |
| **Other Accession** | Q5XHH7, Q6NRL6, Q9DBY1 |
| **Reactivity** | Human |
| **Predicted** | Mouse, Xenopus, Rat, Bovine, Canine, Rabbit, Chicken |
| **Host** | Rabbit |
| **Clonality** | Polyclonal |
| **Isotype** | Rabbit IgG |
| **Clone Names** | RB15288 |
| **Calculated MW** | 67685 |
| **Antigen Region** | 106-138 |

## Additional Information

| | |
|---|---|
| **Gene ID** | 84447 |
| **Other Names** | E3 ubiquitin-protein ligase synoviolin, 632-, Synovial apoptosis inhibitor 1, SYVN1, HRD1, KIAA1810 |
| **Target/Specificity** | This HRD1 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 106-138 amino acids from the N-terminal region of human 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** | 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) |

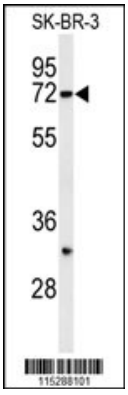
## Background

HRD1 encodes a protein involved in endoplasmic reticulum (ER)-associated degradation. The encoded protein removes unfolded proteins, accumulated during ER stress, by retrograde transport to the cytosol from the ER. This protein also uses the ubiquitin-proteasome system for additional degradation of unfolded proteins. This gene and the mitochondrial ribosomal protein L49 gene use in their respective 3' UTRs some of the same genomic sequence.

## References

Bernardi, K.M., et al. Mol. Biol. Cell 21(1):140-151(2010) Ballar, P., et al. Int. J. Biochem. Cell Biol. 42(1):167-173(2010) Shmueli, A., et al. Biochem. Biophys. Res. Commun. 390(3):758-762(2009)

## Images




Western blot analysis of HRD1 Antibody (N-term) (Cat. #AP2184e) in SK-BR-3 cell line lysates (35ug/lane). HRD1 (arrow) was detected using the purified Pab.

## Citations

- Pharmacological activation of ATF6 remodels the proteostasis network to rescue pathogenic GABA receptors
- Anti-Warburg effect by targeting HRD1-PFKP pathway may inhibit breast cancer progression
- Enhanced endoplasmic reticulum entry of tumor antigen is crucial for cross-presentation induced by dendritic cell-targeted vaccination.
- MHC class I molecules are preferentially ubiquitinated on endoplasmic reticulum luminal residues during HRD1 ubiquitin E3 ligase-mediated dislocation.
- TMEM129 is a Derlin-1 associated ERAD E3 ligase essential for virus-induced degradation of MHC-I.
- Grp94 Delivers γ-aminobutyric Acid Type A (GABAA) Receptors to Hrd1-Mediatd Endoplasmic Reticulum-Associated Degradation.
- Proteostasis Regulators Restore Function of Epilepsy-Associated GABAReceptors

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.