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Diagnostik & molekulare Diagnostik



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### Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

### SZABO-SCANDIC HandelsgmbH

Quellenstraße 110, A-1100 Wien

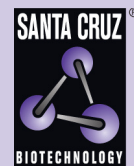
T. +43(0)1 489 3961-0

F. +43(0)1 489 3961-7

[mail@szabo-scandic.com](mailto:mail@szabo-scandic.com)

[www.szabo-scandic.com](http://www.szabo-scandic.com)

[linkedin.com/company/szaboscandic](https://www.linkedin.com/company/szaboscandic) 



# Synoviolin (h3): 293T Lysate: sc-170272

## BACKGROUND

Ubiquitination is an important mechanism through which three classes of enzymes act in concert to target short-lived or abnormal proteins for destruction. The three classes of enzymes involved in ubiquitination are the ubiquitin-activating enzymes (E1s), the ubiquitin-conjugating enzymes (E2s) and the ubiquitin-protein ligases (E3s). Synoviolin, also known as SYVN1 (synovial apoptosis inhibitor 1) or HRD1, is a 617 amino acid multi-pass membrane protein that localizes to the endoplasmic reticulum and contains one RING-type zinc finger. Expressed ubiquitously with highest expression in kidney and liver, Synoviolin exists as a homodimer that exhibits E3 ubiquitin-protein ligase activity and is a component of the ER-associated degradation (ERAD) complex, a multi-protein structure that mediates the degradation of misfolded proteins within the ER. Synoviolin is upregulated in patients with rheumatoid arthritis (RA), suggesting a role for Synoviolin in the pathogenesis of RA.

## REFERENCES

1. Kikkert, M., et al. 2004. Human HRD1 is an E3 ubiquitin ligase involved in degradation of proteins from the endoplasmic reticulum. *J. Biol. Chem.* 279: 3525-3534.
2. Lilley, B.N. and Ploegh, H.L. 2005. Multiprotein complexes that link dislocation, ubiquitination, and extraction of misfolded proteins from the endoplasmic reticulum membrane. *Proc. Natl. Acad. Sci. USA* 102: 14296-14301.
3. Yamasaki, S., et al. 2006. Resistance to endoplasmic reticulum stress is an acquired cellular characteristic of rheumatoid synovial cells. *Int. J. Mol. Med.* 18: 113-117.
4. Yamasaki, S., et al. 2007. The roles of Synoviolin in crosstalk between endoplasmic reticulum stress-induced apoptosis and p53 pathway. *Cell Cycle* 6: 1319-1323.
5. Hosokawa, N., et al. 2008. Human XTP3-B forms an endoplasmic reticulum quality control scaffold with the HRD1-Sel-1L ubiquitin ligase complex and BiP. *J. Biol. Chem.* 283: 20914-20924.
6. Cattaneo, M., et al. 2008. Sel-1L and HRD1 are involved in the degradation of unassembled secretory Ig- $\mu$  chains. *J. Cell. Physiol.* 215: 794-802.
7. Omura, T., et al. 2008. Novel functions of ubiquitin ligase HRD1 with transmembrane and proline-rich domains. *J. Pharmacol. Sci.* 106: 512-519.
8. Yagishita, N., et al. 2008. Synoviolin, protein folding and the maintenance of joint homeostasis. *Nat. Clin. Pract. Rheumatol.* 4: 91-97.

## CHROMOSOMAL LOCATION

Genetic locus: SYVN1 (human) mapping to 11q13.1.

## PRODUCT

Synoviolin (h3): 293T Lysate represents a lysate of human Synoviolin transfected 293T cells and is provided as 100  $\mu$ g protein in 200  $\mu$ l SDS-PAGE buffer.

## RESEARCH USE

For research use only, not for use in diagnostic procedures.

## APPLICATIONS

Synoviolin (h3): 293T Lysate is suitable as a Western Blotting positive control for human reactive Synoviolin antibodies. Recommended use: 10-20  $\mu$ l per lane.

Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

## STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) for detailed protocols and support products.