SANTA CRUZ BIOTECHNOLOGY, INC.

ERp19 (H-142): sc-134830

BACKGROUND

Endoplasmic reticulum proteins (ERps) are widely expressed proteins and localize to the ER. ERp19, ERp29, ERp46, ERp57 and ERp72 may act as proteases, protein disulfide isomerases, thiol-disulfide oxidases, phospholipases or a combination of these. ERp19, also designated thioredoxin domain-containing protein 12 (TXNDC12) and ERp46, also designated thioredoxin domain containing 5 (TXNDC5), belong to the thioredoxin superfamily and contain a thioredoxin fold with a consensus active-site sequence (CxxC). Both ERp19 and ERp46 are widely expressed ER luminal proteins that are most abundant in the liver and are enriched in purified liver ER vesicles. ERp19 shows significant protein thiol-disulfide oxidase activity *in vitro,* which is dependent on the presence of both active-site cysteines.

REFERENCES

1. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 609448. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
2. Liu, F., Rong, Y.P., Zeng, L.C., Zhang, X. and Han, Z.G. 2003. Isolation and characterization of a novel human thioredoxin-like gene hTLP19 encoding a secretory protein. Gene 315: 71-78.
3. Alanen, H.I., Williamson, R.A., Howard, M.J., Lappi, A.K., Jäntti, H.P., Rautio, S.M., Kellokumpu, S. and Ruddock, L.W. 2003. Functional characterization of ERp18, a new endoplasmic reticulum-located thioredoxin superfamily member. J. Biol. Chem. 278: 28912-28920.
4. Knoblach, B., Keller, B.O., Groenendyk, J., Aldred, S., Zheng, J., Lemire, B.D., Li, L. and Michalak, M. 2003. ERp19 and ERp46, new members of the thioredoxin family of endoplasmic reticulum proteins. Mol. Cell. Proteomics 2: 1104-1119.

CHROMOSOMAL LOCATION

Genetic locus: TXNDC12 (human) mapping to 1p32.3; Txndc12 (mouse) mapping to 4 C7.

SOURCE

ERp19 (H-142) is a rabbit polyclonal antibody raised against amino acids 31-172 mapping at the C-terminus of ERp19 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.

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.

APPLICATIONS

ERp19 (H-142) is recommended for detection of ERp19 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

ERp19 (H-142) is also recommended for detection of ERp19 in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for ERp19 siRNA (h): sc-60597, ERp19 siRNA (m): sc-60598, ERp19 shRNA Plasmid (h): sc-60597-SH, ERp19 shRNA Plasmid (m): sc-60598-SH, ERp19 shRNA (h) Lentiviral Particles: sc-60597-V and ERp19 shRNA (m) Lentiviral Particles: sc-60598-V.

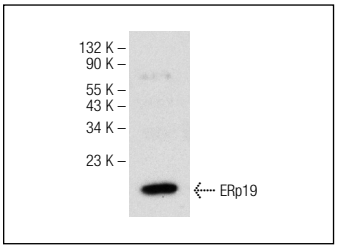
Molecular Weight of ERp19: 20 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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 goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



ERp19 (H-142): sc-134830. Western blot analysis of ERp19 expression in HeLa whole cell lysate.

RESEARCH USE

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