

ERp46 (E-19): sc-49660

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. ERp46 reduces Insulin disulfide bonds and also complements protein disulfide-isomerase deficiency in yeast. ERp46 may protect hypoxic cells from apoptosis, as its expression is induced by hypoxia.

REFERENCES

1. Alanen, H.I., et al. 2003. Functional characterization of ERp18, a new endoplasmic reticulum-located thioredoxin superfamily member. *J. Biol. Chem.* 278: 28912-28920.
2. Sullivan, D.C., et al. 2003. EndoPDI, a novel protein-disulfide isomerase-like protein that is preferentially expressed in endothelial cells acts as a stress survival factor. *J. Biol. Chem.* 278: 47079-47088.
3. Liu, F., et al. 2003. Isolation and characterization of a novel human thioredoxin-like gene hTLP19 encoding a secretory protein. *Gene* 315: 71-78.
4. Knoblach, B., et al. 2003. ERp19 and ERp46, new members of the thioredoxin family of endoplasmic reticulum proteins. *Mol. Cell. Proteomics* 2: 1104-1119.
5. Morand, J.P., et al. 2005. Proteomic profiling of hepatic endoplasmic reticulum-associated proteins in an animal model of Insulin resistance and metabolic dyslipidemia. *J. Biol. Chem.* 280: 17626-17633.

CHROMOSOMAL LOCATION

Genetic locus: TXNDC5 (human) mapping to 6p24.3; TxnDC5 (mouse) mapping to 13 A3.3.

SOURCE

ERp46 (E-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of ERp46 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.

Blocking peptide available for competition studies, sc-49660 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

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

APPLICATIONS

ERp46 (E-19) is recommended for detection of ERp46 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).

Suitable for use as control antibody for ERp46 siRNA (h): sc-60601, ERp46 siRNA (m): sc-60602, ERp46 shRNA Plasmid (h): sc-60601-SH, ERp46 shRNA Plasmid (m): sc-60602-SH, ERp46 shRNA (h) Lentiviral Particles: sc-60601-V and ERp46 shRNA (m) Lentiviral Particles: sc-60602-V.

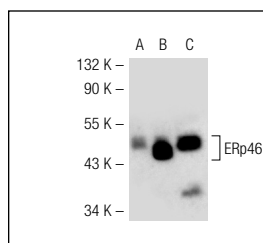
Molecular Weight of ERp46: 49 kDa.

Positive Controls: ERp46 (m): 293T Lysate: sc-120111, K-562 whole cell lysate: sc-2203 or JAR cell lysate: sc-2276.

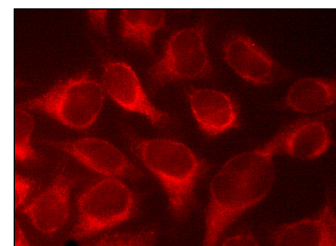
RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (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 donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



ERp46 (E-19): sc-49660. Western blot analysis of ERp46 expression in non-transfected 293T: sc-117752 (A), mouse ERp46 transfected 293T: sc-120111 (B) and K-562 (C) whole cell lysates.



ERp46 (E-19): sc-49660. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic localization.

RESEARCH USE

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

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Try **ERp46 (C-11): sc-271667** or **ERp46 (F-3): sc-271465**, our highly recommended monoclonal alternatives to ERp46 (E-19).