

ERp46 (F-3): sc-271465

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. Knoblauch, B., et al. 2003. ERp19 and ERp46, new members of the thioredoxin family of endoplasmic reticulum proteins. *Mol. Cell. Proteomics* 2: 1104-1119.
4. Liu, F., et al. 2003. Isolation and chara encoding a secretory protein. *Gene* 315: 71-78.
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.

SOURCE

ERp46 (F-3) is a mouse monoclonal antibody raised against amino acids 137-216 mapping within an internal region of ERp46 of human origin.

PRODUCT

Each vial contains 200 µg IgG₁ kappa light chain 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 for detailed protocols and support products.

APPLICATIONS

ERp46 (F-3) is recommended for detection of ERp46 of human origin by Western Blotting (starting dilution 1:100, 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), immunohistochemistry (including paraffin-embedded sections) (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 shRNA Plasmid (h): sc-60601-SH and ERp46 shRNA (h) Lentiviral Particles: sc-60601-V.

Molecular Weight of ERp46: 49 kDa.

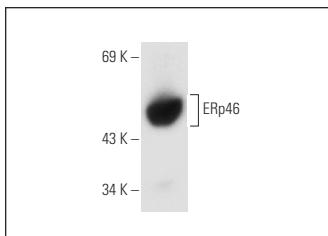
Positive Controls: HeLa whole cell lysate: sc-2200, Hep G2 cell lysate: sc-2227 or JAR cell lysate: sc-2276.

RECOMMENDED SUPPORT REAGENTS

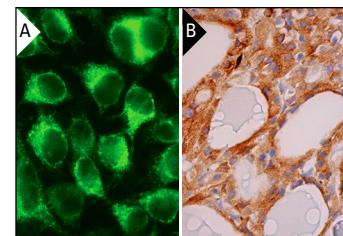
To ensure optimal results, the following support reagents are recommended:

- 1) Western Blotting: use m-IgG_κ BP-HRP: sc-516102 or m-IgG_κ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 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 m-IgG_κ BP-FITC: sc-516140 or m-IgG_κ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850. 4) Immunohistochemistry: use m-IgG_κ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



ERp46 (F-3): sc-271465. Western blot analysis of ERp46 expression in HeLa whole cell lysate.



ERp46 (F-3): sc-271465. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic localization (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human thyroid gland tissue showing cytoplasmic staining of glandular cells (B).

RESEARCH USE

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