SANTA CRUZ BIOTECHNOLOGY, INC.

# ERp46 (C-11): sc-271667

SANTA CRUZ BIOTECHNOLOGY

*The Power to Question*

## 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.


## CHROMOSOMAL LOCATION

Genetic locus: TXNDC5 (human) mapping to 6p24.3; Txndc5 (mouse) mapping to 13 A3.3.

## SOURCE

ERp46 (C-11) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 391-423 at the C-terminus of ERp46 of human origin.

## PRODUCT

Each vial contains 200 µg $IgG_1$ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

ERp46 (C-11) is available conjugated to agarose (sc-271667 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-271667 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-271667 PE), fluorescein (sc-271667 FITC), Alexa Fluor® 488 (sc-271667 AF488), Alexa Fluor® 546 (sc-271667 AF546), Alexa Fluor® 594 (sc-271667 AF594) or Alexa Fluor® 647 (sc-271667 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-271667 AF680) or Alexa Fluor® 790 (sc-271667 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-271667 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).



## STORAGE

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

## APPLICATIONS

ERp46 (C-11) is recommended for detection of ERp46 of mouse, rat and 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 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.

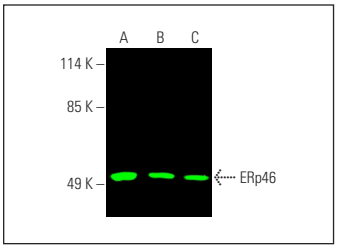
Molecular Weight of ERp46: 49 kDa.

Positive Controls: HEK293 whole cell lysate: sc-45136, HeLa whole cell lysate: sc-2200 or DU 145 cell lysate: sc-2268.

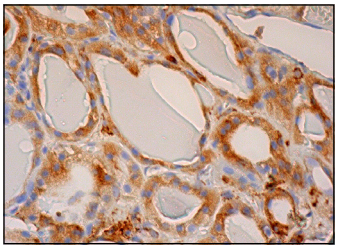
## RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ 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-IgGκ BP-FITC: sc-516140 or m-IgGκ 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-IgGκ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

## DATA




ERp46 (C-11): sc-271667. Near-infrared western blot analysis of ERp46 expression in HEK293 (**A**), HeLa (**B**) and DU 145 (**C**) whole cell lysates. Blocked with UltraCruz® Blocking Reagent: sc-516214. Detection reagent used: m-IgGκ BP-CFL 680: sc-516180.



ERp46 (C-11): sc-271667. Immunoperoxidase staining of formalin fixed, paraffin-embedded human thyroid gland tissue showing cytoplasmic staining of glandular cells.

## SELECT PRODUCT CITATIONS


1. Wang, G., et al. 2020. Arf1-mediated lipid metabolism sustains cancer cells and its ablation induces anti-tumor immune responses in mice. Nat. Commun. 11: 220.


## RESEARCH USE

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