

# ERp72 (C-20): sc-32231

## BACKGROUND

Mammals defend themselves against intracellular pathogens through presentation of cytoplasmically derived short pathogenic peptides to the cell surface of cytotoxic T lymphocytes, which subsequently leads to cytotoxic events with respect to the affected cell. Antigen presentation is mediated by major histocompatibility complex (MHC) class I molecules, which bind and coordinate short pathogenic peptides. The proper folding and assembly of MHC class I molecules in the endoplasmic reticulum (ER) involve a number of components. MHC class I molecules assemble in the ER with chaperones before binding to the transporter associated with antigen processing (TAP) protein. ERp57 is a component of the MHC class I pathway that appears to interact with MHC class I molecules before they associate with TAP. ERp72, also designated protein disulfide-isomerase A4, is involved in the catalysis of protein-S-S- bond rearrangement. ERp57 and ERp72 may act as proteases, protein disulfide isomerases, phospholipases or a combination of these.

## CHROMOSOMAL LOCATION

Genetic locus: PDIA4 (human) mapping to 7q36.1; Pdia4 (mouse) mapping to 6 B2.3.

## SOURCE

ERp72 (C-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of ERp72 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-32231 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## RESEARCH USE

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

## APPLICATIONS

ERp72 (C-20) is recommended for detection of ERp72 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).

ERp72 (C-20) is also recommended for detection of ERp72 in additional species, including canine, bovine, porcine and avian.

Suitable for use as control antibody for ERp72 siRNA (h): sc-44571, ERp72 siRNA (m): sc-44576, ERp72 shRNA Plasmid (h): sc-44571-SH, ERp72 shRNA Plasmid (m): sc-44576-SH, ERp72 shRNA (h) Lentiviral Particles: sc-44571-V and ERp72 shRNA (m) Lentiviral Particles: sc-44576-V.

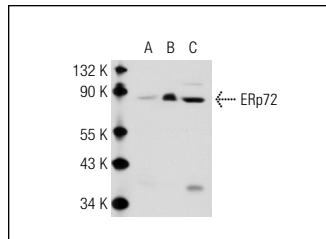
Molecular Weight of ERp72: 72 kDa.

Positive Controls: ERp72 (h): 293T Lysate: sc-175288, JAR cell lysate: sc-2276 or Jurkat whole cell lysate: sc-2204.

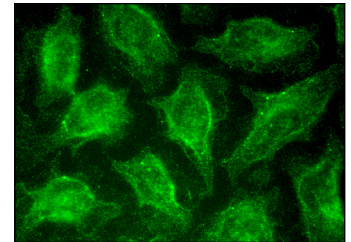
## RECOMMENDED SECONDARY REAGENTS

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



ERp72 (C-20): sc-32231. Western blot analysis of ERp72 expression in non-transfected 293T: sc-117752 (A), human ERp72 transfected 293T: sc-175288 (B) and JAR (C) whole cell lysates.



ERp72 (C-20): sc-32231. Immunofluorescence staining of methanol-fixed HeLa cells showing membrane localization.

## SELECT PRODUCT CITATIONS

- Chen, N., et al. 2008. Quantitative proteome analysis of HCC cell lines with different metastatic potentials by SILAC. *Proteomics* 8: 5108-5118.

## 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](http://www.scbt.com) or our catalog for detailed protocols and support products.



Try **ERp72 (B-4): sc-390530** or **ERp72 (C-7): sc-376230**, our highly recommended monoclonal alternatives to ERp72 (C-20).