

## ERp27 (Y-19): sc-246528

### BACKGROUND

Endoplasmic reticulum proteins (ERps) are widely expressed proteins that localize to the ER and may act as proteases, protein disulfide isomerases, thiol-disulfide oxidases or phospholipases. ERp27 (endoplasmic reticulum protein 27 kDa), also known as C12orf46, is a 273 amino acid protein that contains one thioredoxin domain and, characteristic of ERps, localizes to the lumen of the endoplasmic reticulum. ERp27 lacks the CXXC active site that is necessary for catalytic activity and, therefore, functions as a non-catalytic disulfide isomerase. Although ERp27 is catalytically inactive, it is thought to bind to and interact with ERp57 and Somatostatin. The gene encoding ERp27 localizes to human chromosome 12, which houses over 1,100 genes and comprises approximately 4.5% of the human genome.

### REFERENCES

1. Online Mendelian Inheritance in Man, OMIM<sup>™</sup>. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 610642. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
2. Alanen, H.I., et al. 2003. Functional characterization of ERp18, a new endoplasmic reticulum-located thioredoxin superfamily member. *J. Biol. Chem.* 278: 28912-28920.
3. Russell, S.J., et al. 2004. The primary substrate binding site in the b' domain of ERp57 is adapted for endoplasmic reticulum lectin association. *J. Biol. Chem.* 279: 18861-18869.
4. Lim, J., et al. 2006. A protein-protein interaction network for human inherited ataxias and disorders of Purkinje cell degeneration. *Cell* 125: 801-814.
5. Alanen, H.I., et al. 2006. ERp27, a new non-catalytic endoplasmic reticulum-located human protein disulfide isomerase family member, interacts with ERp57. *J. Biol. Chem.* 281: 33727-33738.

### CHROMOSOMAL LOCATION

Genetic locus: ERP27 (human) mapping to 12p12.3.

### SOURCE

ERp27 (Y-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of ERp27 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-246528 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.

### PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.

### APPLICATIONS

ERp27 (Y-19) is recommended for detection of ERp27 of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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); non cross-reactive with other ERp family members.

ERp27 (Y-19) is also recommended for detection of ERp27 in additional species, including porcine.

Suitable for use as control antibody for ERp27 siRNA (h): sc-96064, ERp27 shRNA Plasmid (h): sc-96064-SH and ERp27 shRNA (h) Lentiviral Particles: sc-96064-V.

Molecular Weight of ERp27: 30 kDa.

### 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<sup>™</sup> compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker<sup>™</sup> Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) 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<sup>™</sup> Mounting Medium: sc-24941.

### RESEARCH USE

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