

ERdj3 (C-19): sc-46944

BACKGROUND

Members of the heat shock protein 40 (HSP 40) family of proteins all contain a highly conserved J domain that associates with HSP 70 and regulates the function of HSP 70 by activating its adenosine triphosphatase activity. ERdj3, an HSP 40 chaperone, is expressed in the ER lumen, where it interacts with BiP, a molecule involved in retrotranslocating proteins out of the ER. ERdj3 also associates with several other protein substrates, including unfolded light chains, a nonsecreted Ig light chain mutant and a VSV-G ts045 mutant. Shiga toxin (Stx) is a bacterial tool that enzymatically inactivates the 28S rRNA, inhibiting protein synthesis of infected cells. Stx also interacts with ERdj3 and Sec 61 to form a complex through which proteins are retrotranslocated to the cytoplasm. ERdj3 may play a role in the ER quality control system.

REFERENCES

1. Yu, M., Haslam, RH. and Haslam, DB. 2000. HEDJ, an HSP 40 co-chaperone localized to the endoplasmic reticulum of human cells. *J. Biol. Chem.* 275: 24984-24992.
2. Meunier, L., Usherwood, Y.K., Chung, K.T. and Hendershot, L.M. 2002. A subset of chaperones and folding enzymes form multiprotein complexes in endoplasmic reticulum to bind nascent proteins. *Mol. Biol. Cell* 13: 4456-4469.
3. Nakanishi, K., Kamiguchi, K., Torigoe, T., Nabeta, C., Hirohashi, Y., Asanuma, H., Tobioka, H., Koge, N., Harada, O., Tamura, Y., Nagano, H., Yano, S., Chiba, S., Matsumoto, H. and Sato, N. 2004. Localization and function in endoplasmic reticulum stress tolerance of ERdj3, a new member of HSP 40 family protein. *Cell Stress Chaperones* 9: 253-264.
4. Shen, Y. and Hendershot, L.M. 2005. ERdj3, a stress-inducible endoplasmic reticulum DnaJ homologue, serves as a cofactor for BiP's interactions with unfolded substrates. *Mol. Biol. Cell* 16: 40-50.
5. Yu, M. and Haslam, D.B. 2005. Shiga toxin is transported from the endoplasmic reticulum following interaction with the luminal chaperone HEDJ/ERdj3. *Infect. Immun.* 73: 2524-2532.

CHROMOSOMAL LOCATION

Genetic locus: DNAJB11 (human) mapping to 3q27.3; Dnajb11 (mouse) mapping to 16 B1.

SOURCE

ERdj3 (C-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of ERdj3 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-46944 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

ERdj3 (C-19) is recommended for detection of mature ERdj3 and DnaJ B11 precursor of mouse, rat and 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).

ERdj3 (C-19) is also recommended for detection of mature ERdj3 and DnaJ B11 precursor in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for ERdj3 siRNA (h): sc-60595, ERdj3 siRNA (m): sc-60596, ERdj3 shRNA Plasmid (h): sc-60595-SH, ERdj3 shRNA Plasmid (m): sc-60596-SH, ERdj3 shRNA (h) Lentiviral Particles: sc-60595-V and ERdj3 shRNA (m) Lentiviral Particles: sc-60596-V.

Molecular Weight of ERdj3: 40 kDa.

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

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) 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.

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 or our catalog for detailed protocols and support products.


 MONOS
 Satisfaction
 Guaranteed

Try **ERdj3 (C-7): sc-271240**, our highly recommended monoclonal alternative to ERdj3 (C-19).