

Ero1-L α (D-7): sc-365526

BACKGROUND

Ero1-L α (endoplasmic oxidoreductin-1-like), also known as Ero1 α or oxidoreductin-1-L α , is an essential oxidoreductase that oxidizes proteins and is required for the folding of immunoglobulins. Ero1-L α covalently binds with PDI (protein disulfide-isomerase) and together they produce disulfide bonds between proteins in the endoplasmic reticulum. Ero1-L α and SIRT1 regulate adiponectin secretion from adipose tissue. Ero1-L α and associated proteins also modulate PPAR γ (peroxisome proliferator-activated receptor γ) and SIRT1 activities. Ero1-L α is stimulated by hypoxia, suggesting that it is regulated through the HIF (hypoxia inducible transcription factor) pathway. Ero1-L α is ubiquitously expressed at low levels but expressed at high levels in upper digestive tract and esophagus. Ero1-L α may function both as a monomer and a homodimer.

CHROMOSOMAL LOCATION

Genetic locus: ERO1A (human) mapping to 14q22.1; Ero1I (mouse) mapping to 14 C1.

SOURCE

Ero1-L α (D-7) is a mouse monoclonal antibody raised against amino acids 91-180 mapping near the N-terminus of Ero1-L α of human origin.

PRODUCT

Each vial contains 200 μ g IgG $_1$ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Ero1-L α (D-7) is available conjugated to agarose (sc-365526 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-365526 HRP), 200 μ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-365526 PE), fluorescein (sc-365526 FITC), Alexa Fluor[®] 488 (sc-365526 AF488), Alexa Fluor[®] 546 (sc-365526 AF546), Alexa Fluor[®] 594 (sc-365526 AF594) or Alexa Fluor[®] 647 (sc-365526 AF647), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-365526 AF680) or Alexa Fluor[®] 790 (sc-365526 AF790), 200 μ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

Ero1-L α (D-7) is recommended for detection of Ero1-L α of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g 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 Ero1-L α siRNA (h): sc-77284, Ero1-L α siRNA (m): sc-77285, Ero1-L α shRNA Plasmid (h): sc-77284-SH, Ero1-L α shRNA Plasmid (m): sc-77285-SH, Ero1-L α shRNA (h) Lentiviral Particles: sc-77284-V and Ero1-L α shRNA (m) Lentiviral Particles: sc-77285-V.

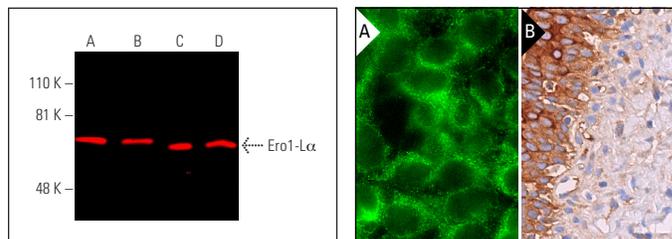
Molecular Weight of Ero1-L α : 54 kDa.

Positive Controls: RAW 264.7 whole cell lysate: sc-2211, MDA-MB-435S whole cell lysate: sc-364184 or HeLa whole cell lysate: sc-2200.

STORAGE

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

DATA



Ero1-L α (D-7): sc-365526. Near-infrared western blot analysis of Ero1-L α expression in HeLa (A), MDA-MB-435S (B), RAW 264.7 (C) and NIH/3T3 (D) whole cell lysates. Blocked with UltraCruz[®] Blocking Reagent: sc-516214. Detection reagent used: m-IgG κ BP-CFL 790: sc-516181.

Ero1-L α (D-7): sc-365526. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic localization (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human urinary bladder tissue showing cytoplasmic staining of urothelial cells (B).

SELECT PRODUCT CITATIONS

- Manuel, A.M., et al. 2017. Succination of protein disulfide isomerase links mitochondrial stress and endoplasmic reticulum stress in the adipocyte during diabetes. *Antioxid. Redox Signal.* 27: 1281-1296.
- Yanda, M.K., et al. 2018. A potential strategy for reducing cysts in autosomal dominant polycystic kidney disease with a CFTR corrector. *J. Biol. Chem.* 293: 11513-11526.
- Moulis, M., et al. 2019. The multifunctional sorting protein PACS-2 controls mitophagosome formation in human vascular smooth muscle cells through mitochondria-ER contact sites. *Cells* 8: 638.
- Legeay, S., et al. 2020. Selective deficiency in endothelial PTP1B protects from diabetes and endoplasmic reticulum stress-associated endothelial dysfunction via preventing endothelial cell apoptosis. *Biomed. Pharmacother.* 127: 110200.
- Lai, L., et al. 2020. Role of endoplasmic reticulum oxidase 1 α in H9C2 cardiomyocytes following hypoxia/reoxygenation injury. *Mol. Med. Rep.* 22: 1420-1428.
- Johnson, B.D., et al. 2022. Identification of natural product sulfuretin derivatives as inhibitors for the endoplasmic reticulum redox protein Ero1 α . *ACS Bio Med Chem Au* 2: 161-170.

RESEARCH USE

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

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.

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