ERp5 (h): 293 Lysate: sc-110585



The Power to Question

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. ERp5, also known as PDIA6 (protein disulfide isomerase family A, member 6) or TXNDC7, is a 440 amino acid protein that contains 2 thioredoxin domains and belongs to the protein disulfide isomerase family. Localized to the melanosome, as well as to the lumen of the ER, ERp5 functions to catalyze the rear-rangement of disulfide bonds in a variety of different proteins. Via its catalytic activity, ERp5 is able to reduce the disulfide bond that binds MICA to tumor cells, thereby releasing MICA and reducing the rate of tumor expansion. Multiple isoforms of ERp5 exist due to alternative splicing events.

REFERENCES

- Chaudhuri, M.M., Tonin, P.N., Lewis, W.H. and Srinivasan, P.R. 1992. The gene for a novel protein, a member of the protein disulphide isomerase/ form I phosphoinositide-specific phospholipase C family, is amplified in hydroxyurea-resistant cells. Biochem. J. 281: 645-650.
- Hayano, T. and Kikuchi, M. 1995. Cloning and sequencing of the cDNA encoding human p5. Gene 164: 377-378.
- 3. Hoshijima, K., Metherall, J.E. and Grunwald, D.J. 2002. A protein disulfide isomerase expressed in the embryonic midline is required for left/right asymmetries. Genes Dev. 16: 2518-2529.
- Kikuchi, M., Doi, E., Tsujimoto, I., Horibe, T. and Tsujimoto, Y. 2002. Functional analysis of human p5, a protein disulfide isomerase homologue. J. Biochem. 132: 451-455.
- Jordan, P.A., Stevens, J.M., Hubbard, G.P., Barrett, N.E., Sage, T., Authi, K.S. and Gibbins, J.M. 2005. A role for the thiol isomerase protein ERp5 in platelet function. Blood 105: 1500-1507.
- Kaiser, B.K., Yim, D., Chow, I.T., Gonzalez, S., Dai, Z., Mann, H.H., Strong, R.K., Groh, V. and Spies, T. 2007. Disulphide-isomerase-enabled shedding of tumour-associated NKG2D ligands. Nature 447: 482-486.
- 7. Online Mendelian Inheritance in Man, OMIM™. 2007. Johns Hopkins University, Baltimore, MD. MIM Number: 611099. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/

CHROMOSOMAL LOCATION

Genetic locus: PDIA6 (human) mapping to 2p25.1.

PRODUCT

ERp5 (h): 293 Lysate represents a lysate of human ERp5 transfected 293 cells and is provided as 100 μ g protein in 200 μ l SDS-PAGE buffer.

STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

RESEARCH USE

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

APPLICATIONS

ERp5 (h): 293 Lysate is suitable as a Western Blotting positive control for human reactive ERp5 antibodies. Recommended use: 10-20 µl per lane.

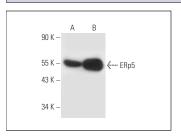
Control 293 Lysate: sc-110760 is available as a Western Blotting negative control lysate derived from non-transfected 293 cells.

ERp5 (G-5): sc-365260 is recommended as a positive control antibody for Western Blot analysis of enhanced human ERp5 expression in ERp5 transfected 293 cells (starting dilution 1:100, dilution range 1:100-1:1,000).

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-lgG κ BP-HRP: sc-516102 or m-lgG κ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz MarkerTM Molecular Weight Standards: sc-2035, UltraCruz[®] Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048.

DATA



ERp5 (G-5): sc-365260. Western blot analysis of ERp5 expression in non-transfected: sc-110760 (**A**) and human ERp5 transfected: sc-110585 (**B**) 293 whole cell lysates.

PROTOCOLS

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

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