epsin 3 (m): 293T Lysate: sc-125307



The Power to Question

BACKGROUND

Epsin 3 (EPN3), also known as EPS-15-interacting protein 3, is a 632 amino acid member of the epsin protein family. Epsin 3 localizes mainly to the perinuclear region of the nucleus and in clathrin-coated vesicles close to the cell periphery. Epsin 3 is expressed in migrating keratinocytes from wounded skin, but not in normal skin or differentiating keratinocytes. Epsin 3 contains one ENTH (epsin N-terminal homology) domain and two UIM (ubiquitin-interacting motif) repeats and is expressed as two isoforms produced by alternative splicing. The gene that encodes epsin 3 maps to human chromosome 17, which comprises over 2.5% of the human genome and encodes over 1,200 genes. Two key tumor suppressor genes are associated with chromosome 17, namely, p53 and BRCA1. Tumor suppressor p53 is necessary for maintenance of cellular genetic integrity by moderating cell fate through DNA repair versus cell death. Malfunction or loss of p53 expression is associated with malignant cell growth and Li-Fraumeni syndrome. Like p53, BRCA1 is directly involved in DNA repair, specifically it is recognized as a genetic determinant of early onset breast cancer and predisposition to cancers of the ovary, colon, prostate gland and fallopian tubes.

REFERENCES

- 1. Hall, J.M., Friedman, L., Guenther, C., Lee, M.K., Weber, J.L., Black, D.M. and King, M.C. 1992. Closing in on a breast cancer gene on chromosome 17q. Am. J. Hum. Genet. 50: 1235-1242.
- Soussi, T., Dehouche, K. and Béroud, C. 2000. p53 website and analysis of p53 gene mutations in human cancer: forging a link between epidemiology and carcinogenesis. Hum. Mutat. 15: 105-113.
- Spradling, K.D., Burke, T.J. and Lohi, J. 2000. Cloning and initial characterization of human epsin 3, a novel matrix-induced keratinocyte specific transcript J. Invest. Dermatol. 115: 332.
- Piura, B., Rabinovich, A. and Yanai-Inbar, I. 2001. Three primary malignancies related to BRCA mutation successively occurring in a BRCA1 185delAG mutation carrier. Eur. J. Obstet. Gynecol. Reprod. Biol. 97: 241-244.
- Spradling, K.D., McDaniel, A.E., Lohi, J. and Pilcher, B.K. 2001. Epsin 3 is a novel extracellular matrix-induced transcript specific to wounded epithelia. J. Biol. Chem. 276: 29257-29267.
- Minamoto, T., Buschmann, T., Habelhah, H., Matusevich, E., Tahara, H., Boerresen-Dale, A.L., Harris, C., Sidransky, D. and Ronai, Z. 2001. Distinct pattern of p53 phosphorylation in human tumors. Oncogene 20: 3341-3347.
- Colland, F., Jacq, X., Trouplin, V., Mougin, C., Groizeleau, C., Hamburger, A., Meil, A., Wojcik, J., Legrain, P. and Gauthier, J.M. 2004. Functional proteomics mapping of a human signaling pathway. Genome Res. 14: 1324-1332.

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.

PROTOCOLS

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

CHROMOSOMAL LOCATION

Genetic locus: EPN3 (mouse) mapping to 11 D.

PRODUCT

epsin 3 (m): 293T Lysate represents a lysate of mouse epsin 3 transfected 293T cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

APPLICATIONS

epsin 3 (m): 293T Lysate is suitable as a Western Blotting positive control for mouse reactive epsin 3 antibodies. Recommended use: $10-20 \mu l$ per lane.

Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

RESEARCH USE

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

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