

ITI-H5 (m): 293T Lysate: sc-127022

BACKGROUND

ITI-H5 (inter- α globulin) inhibitor H5), also known as inter- α -trypsin inhibitor heavy chain H5, is a 942 amino acid protein belonging to the ITIH family. Encoded by a gene that maps to human chromosome 10p14, ITI-H5 is differentially expressed in human breast tumor and ovary tissues, with highest levels in placenta. Existing as four alternatively spliced isoforms, ITI-H5 is composed of multipolypeptides, possibly including one heavy chain containing potential calcium-binding sites and two light chains. ITI-H5 encodes a heavy chain component of one of the inter- α -trypsin inhibitor family members and participates in extracellular matrix stabilization, tumor metastasis prevention and plasma serine protease inhibition. ITI-H5 consists of two conserved ITIH domains: a vault inter- α -trypsin (VIT) domain and a von Willebrand type A (VWA) domain. Decreased expression of ITI-H5 may be involved in various tumor and breast cancer development.

REFERENCES

- Salier, J.P., Diarra-Mehrpour, M., Sesboue, R., Bourguignon, J., Benarous, R., Ohkubo, I., Kurachi, S., Kurachi, K. and Martin, J.P. 1987. Isolation and characterization of cDNAs encoding the heavy chain of human inter- α -trypsin inhibitor (I α TI): unambiguous evidence for multipolypeptide chain structure of I α TI. *Proc. Natl. Acad. Sci. USA* 84: 8272-8276.
- Himmelfarb, M., Klopocki, E., Grube, S., Staub, E., Klamann, I., Hinzmann, B., Kristiansen, G., Rosenthal, A., Dürst, M. and Dahl, E. 2004. ITIH5, a novel member of the inter- α -trypsin inhibitor heavy chain family is down-regulated in breast cancer. *Cancer Lett.* 204: 69-77.
- Dahl, E., Sadr-Nabavi, A., Klopocki, E., Betz, B., Grube, S., Kreutzfeld, R., Himmelfarb, M., An, H.X., Gelling, S., Klamann, I., Hinzmann, B., Kristiansen, G., Grützmann, R., Kuner, R., Petschke, B., Rhiem, K., Wiechen, K., Sers, C., Wiestler, O., Schneider, A., et al. 2005. Systematic identification and molecular characterization of genes differentially expressed in breast and ovarian cancer. *J. Pathol.* 205: 21-28.
- Werbowski-Ogilvie, T.E., Agar, N.Y., Waldkircher de Oliveira, R.M., Faury, D., Antel, J.P., Jabado, N. and Del Maestro, R.F. 2006. Isolation of a natural inhibitor of human malignant glial cell invasion: inter- α -trypsin inhibitor heavy chain 2. *Cancer Res.* 66: 1464-1472.
- Veeck, J., Chorovicer, M., Naami, A., Breuer, E., Zafrakas, M., Bektas, N., Dürst, M., Kristiansen, G., Wild, P.J., Hartmann, A., Knuechel, R. and Dahl, E. 2008. The extracellular matrix protein ITIH5 is a novel prognostic marker in invasive node-negative breast cancer and its aberrant expression is caused by promoter hypermethylation. *Oncogene* 27: 865-876.
- Veeck, J., Breuer, E., Rose, M., Chorovicer, M., Naami, A., Bektas, N., Alkaya, S., von Serényi, S., Horn, F., Hartmann, A., Knüchel, R. and Dahl, E. 2008. Novel prognostic marker in invasive breast cancer. ITIH5 expression is abrogated by aberrant promoter methylation. *Pathologie* 29: 338-346.

CHROMOSOMAL LOCATION

Genetic locus: Itih5 (mouse) mapping to 2 A1.

RESEARCH USE

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

PRODUCT

ITI-H5 (m): 293T Lysate represents a lysate of mouse ITI-H5 transfected 293T cells and is provided as 100 μ g protein in 200 μ l SDS-PAGE buffer.

APPLICATIONS

ITI-H5 (m): 293T Lysate is suitable as a Western Blotting positive control for mouse reactive ITI-H5 antibodies. Recommended use: 10-20 μ l per lane.

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

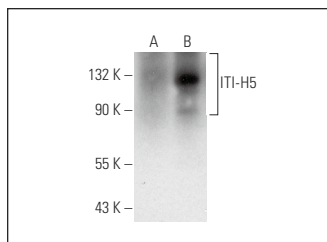
ITI-H5 (B-7): sc-398538 is recommended as a positive control antibody for Western Blot analysis of enhanced mouse ITI-H5 expression in ITI-H5 transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended:

1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048.

DATA



ITI-H5 (B-7): sc-398538. Western blot analysis of ITI-H5 expression in non-transfected: sc-117752 (A) and mouse ITI-H5 transfected: sc-127022 (B) 293T whole cell lysates.

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.