

ITI-H5 (E-18): sc-243122

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., et al. 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., et al. 2004. ITIH5, a novel member of the inter- α -trypsin inhibitor heavy chain family is downregulated in breast cancer. *Cancer Lett.* 204: 69-77.
- Dahl, E., 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., et al. 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., et al. 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.

CHROMOSOMAL LOCATION

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

SOURCE

ITI-H5 (E-18) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of ITI-H5 of mouse origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-243122 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

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

APPLICATIONS

ITI-H5 (E-18) is recommended for detection of ITI-H5 of mouse and rat origin by Western Blotting (starting dilution 1:200, 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for ITI-H5 siRNA (m): sc-146309, ITI-H5 shRNA Plasmid (m): sc-146309-SH and ITI-H5 shRNA (m) Lentiviral Particles: sc-146309-V.

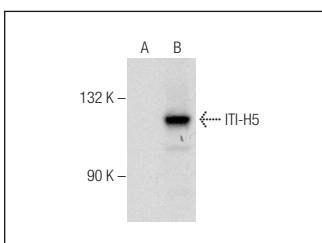
Molecular Weight of ITI-H5: 105 kDa.

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

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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) 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.

DATA



ITI-H5 (E-18): sc-243122. 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.

RESEARCH USE

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

MONOS
Satisfaction
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Try **ITI-H5 (D-1): sc-390885** or **ITI-H5 (B-7): sc-398538**, our highly recommended monoclonal alternatives to ITI-H5 (E-18).