

# ITI-H5 (D-1): sc-390885

## BACKGROUND

ITI-H5 (inter- $\alpha$  (globulin) inhibitor H5), also known as inter- $\alpha$ -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- $\alpha$ -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- $\alpha$ -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- $\alpha$ -trypsin inhibitor (I  $\alpha$  TI): unambiguous evidence for multipolypeptide chain structure of I  $\alpha$  TI. *Proc. Natl. Acad. Sci. USA* 84: 8272-8276.
- Himmelfarb, M., et al. 2004. ITIH5, a novel member of the inter- $\alpha$ -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.

## CHROMOSOMAL LOCATION

Genetic locus: ITIH5 (human) mapping to 10p14; Itih5 (mouse) mapping to 2 A1.

## SOURCE

ITI-H5 (D-1) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 193-210 within an internal region of ITI-H5 of mouse origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG<sub>2b</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

ITI-H5 (D-1) is available conjugated to agarose (sc-390885 AC), 500  $\mu$ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-390885 HRP), 200  $\mu$ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-390885 PE), fluorescein (sc-390885 FITC), Alexa Fluor<sup>®</sup> 488 (sc-390885 AF488), Alexa Fluor<sup>®</sup> 546 (sc-390885 AF546), Alexa Fluor<sup>®</sup> 594 (sc-390885 AF594) or Alexa Fluor<sup>®</sup> 647 (sc-390885 AF647), 200  $\mu$ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor<sup>®</sup> 680 (sc-390885 AF680) or Alexa Fluor<sup>®</sup> 790 (sc-390885 AF790), 200  $\mu$ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-390885 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

## APPLICATIONS

ITI-H5 (D-1) is recommended for detection of ITI-H5 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ 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 ITI-H5 siRNA (h): sc-90320, ITI-H5 siRNA (m): sc-146309, ITI-H5 shRNA Plasmid (h): sc-90320-SH, ITI-H5 shRNA Plasmid (m): sc-146309-SH, ITI-H5 shRNA (h) Lentiviral Particles: sc-90320-V and ITI-H5 shRNA (m) Lentiviral Particles: sc-146309-V.

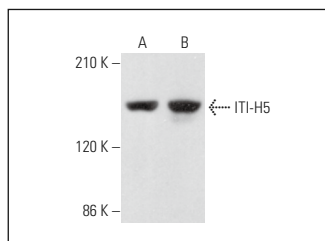
Molecular Weight of ITI-H5: 105 kDa.

Positive Controls: NCI-H460 whole cell lysate: sc-364235 or IMR-32 cell lysate: sc-2409.

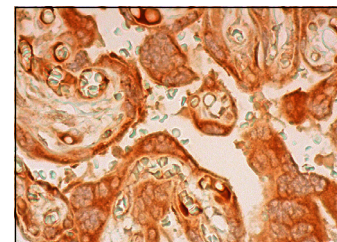
## RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG $\kappa$  BP-HRP: sc-516102 or m-IgG $\kappa$  BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker<sup>™</sup> Molecular Weight Standards: sc-2035, UltraCruz<sup>®</sup> Blocking Reagent: sc-516214 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 m-IgG $\kappa$  BP-FITC: sc-516140 or m-IgG $\kappa$  BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz<sup>®</sup> Mounting Medium: sc-24941 or UltraCruz<sup>®</sup> Hard-set Mounting Medium: sc-359850. 4) Immunohistochemistry: use m-IgG $\kappa$  BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

## DATA



ITI-H5 (D-1): sc-390885. Western blot analysis of ITI-H5 expression in NCI-H460 (A) and IMR-32 (B) whole cell lysates.



ITI-H5 (D-1): sc-390885. Immunoperoxidase staining of formalin fixed, paraffin-embedded human placenta tissue showing cytoplasmic staining of trophoblastic cells.

## STORAGE

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

## RESEARCH USE

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

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