

HAI-1 (h3): 293T Lysate: sc-159178

BACKGROUND

Tissue damage, such as hepatic and renal injury, initiates hepatocyte growth factor activator (HGFAC)-mediated limited proteolytic activation of the inactive single-chain precursor form of HGF. Initially, HGFAC is produced as a precursor protein, which is activated by limited proteolysis and is neutralized by specific inhibitors known as HGF activator inhibitors, designated HAIs. HAIs belong to the Kunitz-type serine protease inhibitor family. HAIs target HGF activator and are involved in the regulation of proteolytic activation of HGF in injured tissues. Human HAI-1 transcript is expressed in various human tissues, such as adult placenta, kidney, pancreas, prostate and small intestine, and fetal kidney and lung. It translates into a 478 amino acid protein. The human HAI-2 gene maps to chromosome 19q13.1 and encodes a 252 amino acid protein, also designated human placental bikunin or kop (Kunitz domain containing protein over-expressed in pancreatic cancer). HAI-1 and HAI-2 are produced in membrane-associated forms, which are secreted as active, proteolytically truncated proteins.

REFERENCES

1. Shimomura, T., Denda, K., Kitamura, A., Kawaguchi, T., Kito, M., Kondo, J., Kagaya, S., Qin, L., Takata, H., Miyazawa, K. and Kitamura, N. 1997. Hepatocyte growth factor activator inhibitor, a novel Kunitz-type serine protease inhibitor. *J. Biol. Chem.* 272: 6370-6376.
2. Marlor, C.W., Delaria, K.A., Davis, G., Muller, D.K., Greve, J.M. and Tamburini, P.P. 1997. Identification and cloning of human placental bikunin, a novel serine protease inhibitor containing two Kunitz domains. *J. Biol. Chem.* 272: 12202-12208.
3. Kawaguchi, T., Qin, L., Shimomura, T., Kondo, J., Matsumoto, K., Denda, K. and Kitamura, N. 1997. Purification and cloning of hepatocyte growth factor activator inhibitor type 2, a Kunitz-type serine protease inhibitor. *J. Biol. Chem.* 272: 27558-27564.
4. Muller-Pillasch, F., Wallrapp, C., Bartels, K., Varga, G., Friess, H., Buchler, M., Adler, G. and Gress, T.M. 1998. Cloning of a new Kunitz-type protease inhibitor with a putative transmembrane domain overexpressed in pancreatic cancer. *Biochim. Biophys. Acta* 1395: 88-95.
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CHROMOSOMAL LOCATION

Genetic locus: SPINT1 (human) mapping to 15q15.1.

PRODUCT

HAI-1 (h3): 293T Lysate represents a lysate of human HAI-1 transfected 293T cells and is provided as 100 µg protein in 200 µl 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.

APPLICATIONS

HAI-1 (h3): 293T Lysate is suitable as a Western Blotting positive control for human reactive HAI-1 antibodies. Recommended use: 10-20 µl per lane.

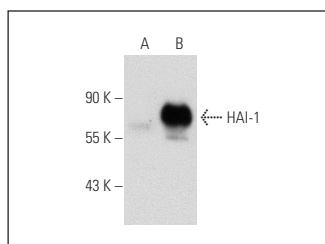
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

HAI-1 (H-1): sc-137159 is recommended as a positive control antibody for Western Blot analysis of enhanced human HAI-1 expression in HAI-1 transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

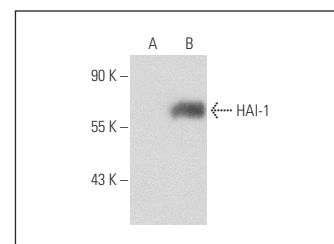
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended:
1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ 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



HAI-1 (H-1): sc-137159. Western blot analysis of HAI-1 expression in non-transfected: sc-117752 (A) and human HAI-1 transfected: sc-159178 (B) 293T whole cell lysates.



HAI-1 (C-4): sc-137160. Western blot analysis of HAI-1 expression in non-transfected: sc-117752 (A) and human HAI-1 transfected: sc-159178 (B) 293T whole cell lysates.

RESEARCH USE

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

PROTOCOLS

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