SANTA CRUZ BIOTECHNOLOGY, INC.

WFDC12 (K-12): sc-86007



BACKGROUND

Peptidases are enzymes that are responsible for hydrolyzing peptide bonds of polypeptide chains during protein catabolism. Protease inhibitors are important peptidase regulators which halt enzymatic function. The WAP (whey acidic protein) domain, also referred to as the WAP-type four-disulfide core domain, is a signature protein motif that contains eight cysteine residues which form disulfide bonds and may exhibit protease inhibitor activity. WAP domain-containing proteins are thought to function in the immune defense by cleaving microbial proteolytic enzymes in order to prevent tissue penetration and infection. WFDC12 (WAP four-disulfide core domain protein 12), also known as WAP2, is a 111 amino acid secreted protein that contains one WAP domain and is highly expressed in lung, esophagus, prostate and skin. A cluster of WAP genes, including WFDC12, exist on chromosome 20, suggesting they evolved by repeated duplications.

REFERENCES

- Brem, G., Brenig, B., Salmons, B., Wolf, E., Müller, M., Erfle, V., Günzburg, W.H. and Dahme, E. 1991. Unexpected transgene expression of a mammary-specific growth hormone gene construct in Bergmann glial cells of the mouse. Tierarztl Prax. 19: 345-350.
- Aigner, B., Pambalk, K., Reichart, U., Besenfelder, U., Bosze, Z., Renner, M., Günzburg, W.H., Wolf, E., Müller, M. and Brem, G. 1999. Species-specific alternative splicing of transgenic RNA in the mammary glands of pigs, rabbits, and mice. Biochem. Biophys. Res. Commun. 257: 843-850.
- 3. Lundwall, A. and Clauss, A. 2002. Identification of a novel protease inhibitor gene that is highly expressed in the prostate. Biochem. Biophys. Res. Commun. 290: 452-456.
- Clauss, A., Lilja, H. and Lundwall, A. 2002. A locus on human chromosome 20 contains several genes expressing protease inhibitor domains with homology to whey acidic protein. Biochem. J. 368: 233-242.
- Clark, H.F., Gurney, A.L., Abaya, E., Baker, K., Baldwin, D., Brush, J., Chen, J., Chow, B., Chui, C., Crowley, C., Currell, B., Deuel, B., Dowd, P., Eaton, D., Foster, J., Grimaldi, C., Gu, Q., Hass, P.E., Heldens, S., Huang, A., Kim, H.S., Klimowski, L., Jin, Y., Johnson, S., Lee, J., Lewis, L., Liao, D., Mark, M., Robbie, E., Sanchez, C., Schoenfeld, J., Seshagiri, S., Simmons, L., et al. 2003. The secreted protein discovery initiative (SPDI), a large-scale effort to identify novel human secreted and transmembrane proteins: a bioinformatics assessment. Genome Res. 13: 2265-2270.
- Clauss, A., Lilja, H. and Lundwall, A. 2005. The evolution of a genetic locus encoding small serine proteinase inhibitors. Biochem. Biophys. Res. Commun. 333: 383-389.
- Lundwall, A. 2007. A locus on chromosome 20 encompassing genes that are highly expressed in the epididymis. Asian J. Androl. 9: 540-544.
- Hurle, B., Swanson, W. and Green, E.D. 2007. Comparative sequence analyses reveal rapid and divergent evolutionary changes of the WFDC locus in the primate lineage. Genome Res. 17: 276-286.

CHROMOSOMAL LOCATION

Genetic locus: WFDC12 (human) mapping to 20q13.12.

SOURCE

WFDC12 (K-12) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping within an internal region of WFDC12 of human origin.

PRODUCT

Each vial contains 100 μg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-86007 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

WFDC12 (K-12) is recommended for detection of WFDC12 of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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 WFDC12 siRNA (h): sc-76919, WFDC12 shRNA Plasmid (h): sc-76919-SH and WFDC12 shRNA (h) Lentiviral Particles: sc-76919-V.

Molecular Weight of WFDC12: 12 kDa.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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) Immunofluo-rescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

STORAGE

Store at 4° C, **D0 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.

PROTOCOLS

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