SANTA CRUZ BIOTECHNOLOGY, INC.

WFDC8 (E-16): sc-86260

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. WFDC8 (WAP four-disulfide core domain protein 8), also known as WAP8, is a 241 amino acid secreted protein that contains 3 WAP domains and one BPTI/Kunitz inhibitor domain. WFDC8 is ubiquitously expressed, however highest levels are found in trachea and testis. A cluster of WAP genes, including WFDC8, exist on chromosome 20, suggesting they evolved by repeated duplications.

REFERENCES

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2. Clauss, A., et al. 2005. The evolution of a genetic locus encoding small serine proteinase inhibitors. Biochem. Biophys. Res. Commun. 333: 383-389.
3. Shayu, D., et al. 2006. Differential expression and antibacterial activity of WFDC10A in the monkey epididymis. Mol. Cell. Endocrinol. 259: 50-56.
4. Lundwall, A. 2007. A locus on chromosome 20 encompassing genes that are highly expressed in the epididymis. Asian J. Androl. 9: 540-544.
5. Sharp, J.A., et al. 2007. Molecular evolution of monotreme and marsupial whey acidic protein genes. Evol. Dev. 9: 378-392.
6. Hurle, B., et al. 2007. Comparative sequence analyses reveal rapid and divergent evolutionary changes of the WFDC locus in the primate lineage. Genome Res. 17: 276-286.
7. Idoji, Y., et al. 2008. In silico study of whey-acidic-protein domain containing oral protease inhibitors. Int. J. Mol. Med. 21: 461-468.
8. Bingle, C.D., et al. 2008. Novel innate immune functions of the whey acidic protein family. Trends Immunol. 29: 444-453.
9. Liu, J., et al. 2008. Advances in researches on epididymal WFDC-type serine protease inhibitors. Zhonghua Nan Ke Xue 14: 1027-1030.

CHROMOSOMAL LOCATION

Genetic locus: WFDC8 (human) mapping to 20q13.12.

SOURCE

WFDC8 (E-16) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping within an internal region of WFDC8 of human origin.

STORAGE

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

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-86260 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

WFDC8 (E-16) is recommended for detection of WFDC8 of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg 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 WFDC8 siRNA (h): sc-76924, WFDC8 shRNA Plasmid (h): sc-76924-SH and WFDC8 shRNA (h) Lentiviral Particles: sc-76924-V.

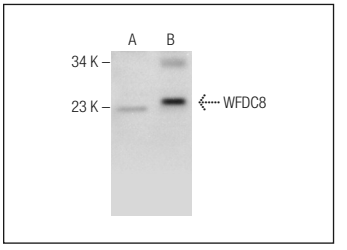
Molecular Weight of WFDC8: 28 kDa.

Positive Controls: WFDC8 (h): 293T Lysate: sc-372273.

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

DATA



WFDC8 (E-16): sc-86260. Western blot analysis of WFDC8 expression in non-transfected: sc-117752 (**A**) and human WFDC8 transfected: sc-372273 (**B**) 293T whole cell lysates.

RESEARCH USE

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