

WFDC1 (W-15): sc-109157

BACKGROUND

The WAP 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. WFDC1 (WAP four-disulfide core domain 1), also known as PS20, is a 220 amino acid secreted protein that contains one WAP domain and is thought to possess growth inhibitory activity. The gene encoding WFDC1 maps to a region on human chromosome 16 that is often lost or mutated in several cancers, including breast, prostate and hepatocellular carcinomas, suggesting a role for native WFDC1 in tumor suppression. Human chromosome 16, on which the WFDC1 gene is located, encodes over 900 genes and comprises nearly 3% of the human genome. The GAN gene is located on chromosome 16 and, with mutation, may lead to giant axonal neuropathy, a nervous system disorder characterized by increasing malfunction with growth. The rare disorder Rubinstein-Taybi syndrome is also associated with chromosome 16, as is Crohn's disease, which is a gastrointestinal inflammatory condition.

REFERENCES

1. Rowley, D.R. 1992. Characterization of a fetal urogenital sinus mesenchymal cell line U4F: secretion of a negative growth regulatory activity. *In Vitro Cell. Dev. Biol.* 28A: 29-38.
2. Rowley, D.R., et al. 1995. Purification of a novel protein (PS20) from urogenital sinus mesenchymal cells with growth inhibitory properties *in vitro*. *J. Biol. Chem.* 270: 22058-22065.
3. Larsen, M., et al. 1998. Molecular cloning and expression of PS20 growth inhibitor. A novel WAP-type "four-disulfide core" domain protein expressed in smooth muscle. *J. Biol. Chem.* 273: 4574-4584.
4. Larsen, M., et al. 2000. The WFDC1 gene encoding PS20 localizes to 16q24, a region of LOH in multiple cancers. *Mamm. Genome* 11: 767-773.
5. Saffroy, R., et al. 2002. Analysis of alterations of WFDC1, a new putative tumour suppressor gene, in hepatocellular carcinoma. *Eur. J. Hum. Genet.* 10: 239-244.
6. Watson, J.E., et al. 2004. Molecular analysis of WFDC1/PS20 gene in prostate cancer. *Prostate* 61: 192-199.
7. Online Mendelian Inheritance in Man, OMIM[™]. 2005. Johns Hopkins University, Baltimore, MD. MIM Number: 605322. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
8. Alvarez, R., et al. 2008. WFDC1/PS20 is a novel innate immunomodulatory signature protein of human immunodeficiency virus (HIV)-permissive CD4⁺ CD45RO⁺ memory T cells that promotes infection by upregulating CD54 integrin expression and is elevated in HIV type 1 infection. *J. Virol.* 82: 471-486.

CHROMOSOMAL LOCATION

Genetic locus: WFDC1 (human) mapping to 16q24.1; Wfdc1 (mouse) mapping to 8 E1.

RESEARCH USE

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

SOURCE

WFDC1 (W-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of WFDC1 of human origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-109157 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

WFDC1 (W-15) is recommended for detection of WFDC1 of mouse, rat and 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).

WFDC1 (W-15) is also recommended for detection of WFDC1 in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for WFDC1 siRNA (h): sc-93280, WFDC1 siRNA (m): sc-155334, WFDC1 shRNA Plasmid (h): sc-93280-SH, WFDC1 shRNA Plasmid (m): sc-155334-SH, WFDC1 shRNA (h) Lentiviral Particles: sc-93280-V and WFDC1 shRNA (m) Lentiviral Particles: sc-155334-V.

Molecular Weight of WFDC1: 24 kDa.

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) 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.

STORAGE

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

PROTOCOLS

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