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Datasheet for 600-401-475S

SFRP1 Antibody

Overview

Description:	Anti-SFRP1 (RABBIT) Antibody - 600-401-475S
Item No.:	600-401-475S
Size:	25 µL
Applications:	ELISA, IHC, WB
Reactivity:	Human
Host Species:	Rabbit

Product Details

Background:	Anti-SFRP1 is a Stem Cell Antibody. SFRP1 (also known as FRP, FRP1, SARP2, Secreted Apoptosis-related Protein 2, Secreted Frizzled-related Protein and Secreted frizzled-related protein 1) is a member of the SFRP family that contains a cysteine-rich domain homologous to the putative Wnt-binding site of Frizzled proteins. SFRPs act as soluble modulators of Wnt signaling. SFRP1 and SFRP5 may be involved in determining the polarity of photoreceptor cells in the retina. SFRP1 is expressed in several human tissues, with the highest levels in heart.
Synonyms:	rabbit anti-SFRP1 antibody, SFRP-1, secreted frizzled related protein 1 antibody, FRP-1 antibody, FRP 1 antibody, FRP1 antibody, FrzA antibody, SARP 2 antibody, SARP2 antibody, Secreted Apoptosis-related Protein 2 antibody
Host Species:	Rabbit
Clonality:	Polyclonal
Format:	IgG

Target Details

Gene Name:	SFRP1
Reactivity:	Human
Immunogen Type:	Conjugated Peptide
Immunogen:	SFRP1 antibody was prepared from whole rabbit serum produced by repeated immunizations with a synthetic peptide corresponding to a 12 aa region of human Sfrp1 protein.

Purity/Specificity:	This affinity purified antibody is directed against human SFRP protein. The product was affinity purified from monospecific antiserum by immunoaffinity purification. A BLAST analysis was used to suggest reactivity with this protein from human based on 100% homology for the immunogen sequence. Expect cross reactivity with SFRP1 from mouse, rat and bovine sources as only a single amino acid residue change is found within the immunogen sequence (91% positive by BLAST). Cross reactivity with SFRP1 homologues from other sources has not been determined.
Relevant Links:	• NCBI - 56117838 • UniProtKB - Q8N474 • GeneID - 6422

Application Details

Tested Applications:	ELISA, IHC, WB
Application Note:	This affinity purified antibody has been tested for use in ELISA, western blot, and IHC. This antibody is suitable for immunofluorescence. Specific conditions for reactivity should be optimized by the end user. Expect a band approximately 37 kDa in size corresponding to Sfrp1 by western blotting in the appropriate cell lysate or extract.
Assay Dilutions:	All assays should be optimized by the user. Recommended dilutions (if any) may be listed below.
ELISA:	1:5,000 - 1:25,000
IF:	5 µg/mL
IHC:	1:800
WB:	1:200-1:2,000

Formulation

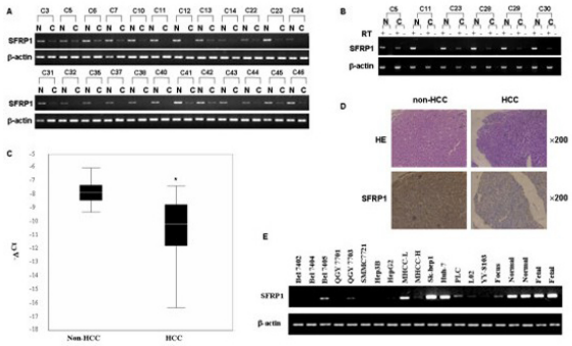
Physical State:	Liquid (sterile filtered)
Concentration:	1.0 mg/mL by UV absorbance at 280 nm
Buffer:	0.02 M Potassium Phosphate, 0.15 M Sodium Chloride, pH 7.2
Preservative:	0.01% (w/v) Sodium Azide
Stabilizer:	None

Shipping & Handling

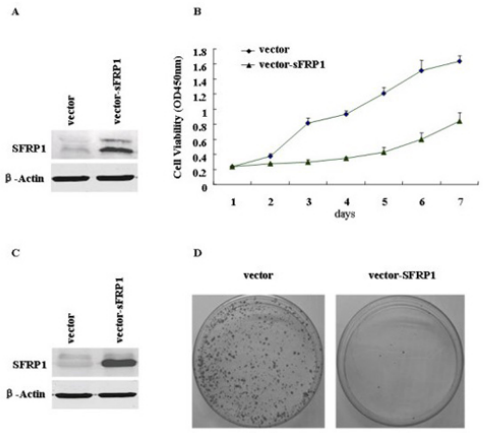
Shipping Condition:	Dry Ice

Storage Condition:	Store vial at -20° C or below prior to opening. This vial contains a relatively low volume of reagent (25 µL). To minimize loss of volume dilute 1:10 by adding 225 µL of the buffer stated above directly to the vial. Recap, mix thoroughly and briefly centrifuge to collect the volume at the bottom of the vial. Use this intermediate dilution when calculating final dilutions as recommended below. Store the vial at -20°C or below after dilution. Avoid cycles of freezing and thawing.
Expiration:	Expiration date is one (1) year from date of receipt.

Images

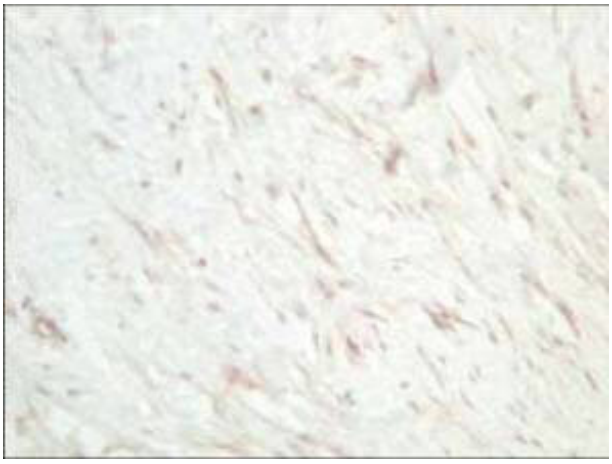


Western Blot
Expression pattern of SFRP1 in HCC specimens by RT-PCR and immunohistochemical staining. (A) Representative results of semi-quantitative RT-PCR of SFRP1 from 24 pairs of HCCs (C) and corresponding adjacent non-cancerous livers (N), where β-actin was employed as an internal control. Each PCR was generally performed in 32 thermal cycles and PCR products were visualized after electrophoresis through 2% agarose. The length of PCR product of SFRP1 and β-actin are 328 bp and 295 bp, respectively. (B) To confirm the absence of influences of genomic DNA contamination, 6 Paired HCCs and non-HCCs were selected randomly to detect the SFRP1 and beta-actin expression by RT-PCR. Experiments were performed by using RT (RT+) or no RT (RT-) in each sample. (C) Real time RT-PCR analysis of SFRP1 was carried out on 46 paired HCCs and adjacent non-cancerous livers. For each sample, the relative mRNA level of SFRP1 was normalized based on that of β-actin. The line within each box represents the median -ΔCt value; the upper and lower edges of each box represent the 75th and 25th percentile, respectively; the upper and lower bars indicate the highest and lowest values determined, respectively. * indicates p value <0.001. (D) Representative immunohistochemical staining of a pair of HCC specimen and corresponding non-cancerous liver with anti-SFRP1 antibody. The nuclei were countered stained with hematoxylin. (E) Expression pattern of SFRP1 was evaluated in HCC cell lines, fetal and adult normal livers through RT-PCR, where β-actin was used as a loading control. Fig 1. PMID: 17626620



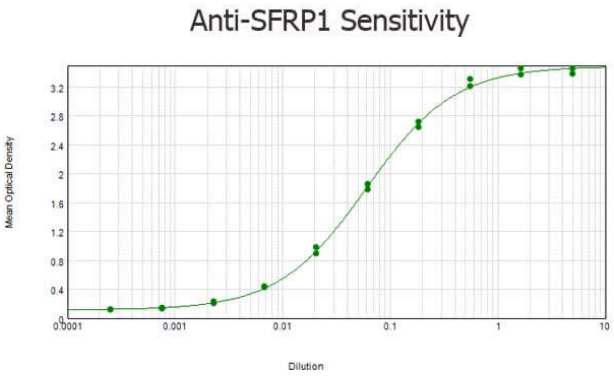
Western Blot

The overexpression of SFRP1 can significantly inhibit the cell growth and colony formation of HCC cells. (A) Plasmid pcDNA3.0-SFRP1 was transiently transfected into YY-8103 cells, confirmed by immunoblotting assay, where empty vector was used as control and β-actin was used as an internal reference. (B) Cell growth curve of YY-8103 cells with the exogenous SFRP1, which cultured in RPMI 1640 with 10% FBS. The cells transfected with the empty vector pcDNA3.0 were served as control. The experiments were repeated at least three times. The result represents the average value of triplicate wells, with standard deviation. T-test was performed to determine the statistical significance between both vector and SFRP1 experiments using SPSS software, and $p<0.05$. (C) Plasmid pcDNA3.0-SFRP1 was also transiently transfected into Hep3B cells, where the overexpression of SFRP1 was confirmed by immunoblotting assay, as compared to the control transfected by empty vector. (D) The colony formation of Hep3B cells was markedly inhibited as transfected with exogenous SFRP1, where the empty vector pcDNA3.0 was served as control (left). Here, after transfection for 24 h, the cells were striped and plated on 100 mm-dishes and then cultured by G418 (600 mg/ml) for 3 weeks. The dishes were stained with crystal violet solution and the number of colonies was counted from three independent experiments. The right histogram showed the colony formation efficiency, where the numbers represented the average value of three independent experiments, with standard deviation ($p < 0.01$, as compared with that of vector control). Fig 2.
PMID: 17626620



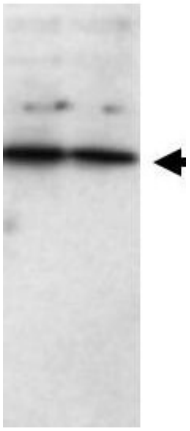
Immunohistochemistry

Rockland's Affinity Purified anti-Human SFRP1 antibody was used at a 1:800 dilution for 20 min to detect SFRP in human dermal hypertrophic scar tissue. Tissue was formalin-fixed followed by heat mediated antigen retrieval prior to blocking. HRP Gt-a-Rabbit IgG (p/n 611-1302) is suitable for secondary antibody detection.



ELISA

ELISA results of purified Rabbit anti-SFRP1 Antibody tested against BSA-conjugated peptide of immunizing peptide. Each well was coated in duplicate with 0.1µg of conjugate. The starting dilution of antibody was 5µg/ml and the X-axis represents the Log10 of a 3-fold dilution. This titration is a 4-parameter curve fit where the IC50 is defined as the titer of the antibody. Assay performed using 3% fish gel, Goat anti-Rabbit IgG Antibody Peroxidase Conjugated (Min X Bv Ch Gt GP Ham Hs Hu Ms Rt & Sh Serum Proteins) (p/n 611-103-122) and TMB ELISA Peroxidase Substrate (p/n TMBE-1000).



Western Blot

Western blot using Rockland's Affinity Purified anti-SFRP1 antibody shows detection of a band ~37 kDa (arrowhead) corresponding to SFRP1 in lysates from human cultured airway epithelial cells. Lysates were run on a SDS-PAGE and transferred onto nitrocellulose followed by reaction with a 1:230 dilution of anti-SFRP1 antibody overnight at 4°C. Signal was detected using standard techniques. Personnel communication Becky Mercer, University of Columbia.

References

- Huang J et al. Down-regulation of SFRP1 as a putative tumor suppressor gene can contribute to human hepatocellular carcinoma. *BMC Cancer.* (2007)

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