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Antibodies to Secreted frizzled-related protein 2 (Sfrp2)

Secreted frizzled-related protein 2 (Sfrp2) antibodies. Catalog # Sfrp2-201AP, P-Sfrp2, PC-Sfrp2.

Accession # AAH08666 and Alternate Nomenclature: FRP-2; SARP1; SDF-5; Secreted apoptosis-related protein 1

Secreted frizzled-related protein 2 (Sfrp2) is a member of Sfrp family of proteins, consisting of five members in mammals. The N-terminal region of these proteins shares sequence homology with extracellular Wnt binding domain of frizzled receptors (1). Wnts are a large family of cysteine-rich secreted glycoproteins that control development in various organisms (2). Since Sfrp family of proteins interact directly with Wnts, the Sfrp family of proteins have also been implicated in early embryonic development as well as modulating apoptotic events (3). More specifically, Sfrp2 has been shown to play a role in regulating cell growth and differentiation and it is an essential protein required in eye retinal development and myogenesis (4). Sfrp2 is also known to be a tumor-suppressor gene which is epigenetically silenced in medulloblastoma (5).

Recently it was reported that Sfrp2 is a novel stimulator of angiogenesis (6). Normal expression of this protein stimulates angiogenesis via a calcineurin/NFAT pathway whereas aberrant expression of this protein is usually found in the vasculature of majority of human breast tumors (7). While this protein is overexpressed in breast tumors, it is downregulated in human cervical cancers through promoter hypermethylation (8). This downregulation leads to abnormal activation of Wnt/ β -catenin signaling pathway which can be attenuated by restoring the expression of SFRP2, hence suppressing cancer cell growth (8). Sfrp2 is located on human chromosome 4q31.3 and is highly expressed in adipose tissue, intestine and colon. It also expressed in heart, brain, skeletal muscle, pancreas, thymus, prostate, testis and ovary. Sfrp2 is approximately a 35.4kDa protein (295 amino acids).

The Sfrp2 antibodies were generated using peptide corresponding to human Sfrp2 protein. Sfrp2 antibodies are affinity purified over immobilized antigen based affinity chromatography, and the purified immunoglobulins are stabilized in antibody stabilization buffer. FabGennix Int. Inc. will provide limited quantities of antigenic blocking protein for competition assays involving Sfrp2 antibodies. Antibodies to Sfrp2 (Sfrp2-201AP) will label ~35.4kDa protein in Western blot positive control for Sfrp2 (PC-Sfrp2) and several other tissues. FabGennix Inc. will conjugate this and other antibodies from its catalog to either secondary enzymes (alk-Pase or HRP) or fluorescent probes at a nominal cost upon request. FabGennix also provides custom antibody production services for researchers that are looking for high affinity mono and polyclonal antibodies in various species. We specialize in making application specific antibodies that are useful in IHC, confocal and other applications where native antigen is detected. For a complete listing of all FabGennix antibodies please visit www.Fabgennix.com.

Catalog #	Host Species	Nature	Cross reactivity	Quantity	Volume
Sfrp2-201AP	Rabbit	Affinity purified Sfrp2 antibodies	R, m, h, others	100 ug	200ul
FITC-Sfrp2	Rabbit	FITC-conjugated Sfrp2 antibodies	R, m, h, others	100ug	200ul
P-Sfrp2	n/a	Antigenic blocking peptide for Sfrp2-201AP	n/a	250 ug	100ul
PC-Sfrp2	n/a	WB positive control for Sfrp2	n/a	For 5 app.	150ul

R = rat; M = mouse; H = human; C = chicken; monk = monkey ; * not all variants are labeled equally

- Immunogen:** Synthetic peptide corresponding to unique epitope on Sfrp2. The peptide sequence was selected from C-terminal, amino acids 250-295. These peptides were covalently modified post-synthetically to achieve desired antigenicity.
- Concentration:** Sfrp2-201AP: IgG concentration 0.64-0.72 mg/ml in antibody stabilization buffer.
- Applications:** Antibody Sfrp2-201AP is ideal for WB and ELISA applications, other applications have not been tested. The species cross reactivity for these antibodies have not been examined fully. The dilutions for this antibody is for reference only, investigators are expected to determine the optimal conditions for specific assay. WB: > 1:500; IMM & i.p pull-down assays: n.d; IHC n.d. ELISA <1:10,000. Application of this antibody in protocols not listed here does not necessarily exclude its use in such procedures.
- Reactivity:** This antibody detects a single band of approximately 35.4kDa in PC-Sfrp2 samples.
- Protocols:** Standard protocol for various applications (WB; IMM and IHC) of this antibody is provided with the product specification sheet, however, FabGennix Inc. strongly recommends investigators to optimize conditions for use of this antibody in their laboratories.
- Form/Storage:** The antiserum is supplied in antibody stabilization buffer. The affinity-purified antibodies are isolated on immobilized antigen-affinity column and supplied as stabilized product. Store at -20°C for long-term storage. FabGennix Inc. does not recommend storage of very dilute antibody solutions unless they are prepared in specially formulated multi use antibody dilution buffer (Cat # DiluOBuffer). Working solutions of antibodies in DiluOBuffer should be filtered through 0.45um filter after every use for long-term storage.
- Notes:** Briefly centrifuge to collect liquid, heat or boil PC-Sfrp2 tube for 1-2 minutes to dissolve any precipitate before use. This product is "ready-to-use" for electrophoresis. After thawing store at room temperature. Repeated freezing and thawing may result in appearance of higher MW immunoreactive bands.
- New Reagents:** Now you can recycle your western blots (nitrocellulose, supported membranes and PVDF membranes) by using our StripOBuffer (Cat FGI-1989). Each stripping is guaranteed to give better signal (up to 8 stripping). No strong pungent smell of reducing agents or heating required. Block in 5X diluOBuffer and you are ready for blotting with a new antibody
- References:**

Western Blot of Sfrp2. The Sfrp2 antibody (Cat # Sfrp2-201AP) at 1:500 in diluOBuffer was probed with PC-Sfrp2 sample. MW of Sfrp2 is approximately 35.4kDa.

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3. Wang S, et al. Frzb, a secreted protein expressed in the Spemann organizer, binds and inhibits wnt-8. Cell. 1997; 88:757-766.
4. Silva AK, et al. Lithium chloride regulates the proliferation of stem-like cells in retinoblastoma cell lines: a potential role for the canonical wnt signaling pathway. Mol Vis. 2010; 16:36-45.
5. Kongkham PN, et al. The SFRP family of Wnt inhibitors function as novel tumor suppressor genes epigenetically silenced in medulloblastoma. Oncogene. 20 May 2010; 29(30):3017-3024.
6. Courtwright A, et al. Secreted frizzle-related protein 2 stimulates angiogenesis via a calcineurin/NFAT signaling pathway. Cancer Res. 1 June 2009; 69(1):4621-4628.
7. Bhati R, et al. Molecular characterization of human breast tumor vascular cells. Am J Pathol. 2008; 172:1381-1390.
8. Chung MT, et al. SFRP1 and SFRP2 suppress the transformation and invasion abilities of cervical cancer cells through Wnt signal pathway. Gynecol Oncol. March 2009; 112(3):646-653.

* For users who may require large amounts of Sfrp2-201AP, please enquire about bulk material discounts.
 This Product is for Research Use Only and is NOT intended for use in humans or clinical diagnosis.

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