Human sFRP-1 Antibody

Antigen Affinity-purified Polyclonal Goat IgG
Catalog Number: AF1384

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human sFRP-1 in direct ELISAs and Western blots. In direct ELISAs, less than 1% cross-reactivity with recombinant mouse sFRP-2, recombinant human (rh) sFRP-3, and rhsFRP-4 is observed.
Source	Polyclonal Goat IgG
Purification	Antigen Affinity-purified
Immunogen	Mouse myeloma cell line NS0-derived recombinant human sFRP-1 (R&D Systems, Catalog # 1384-SF) Ser32-Lys314 Accession # AAB70793
Formulation	Lyophilized from a 0.2 μm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied as a 0.2 μm filtered solution in PBS.

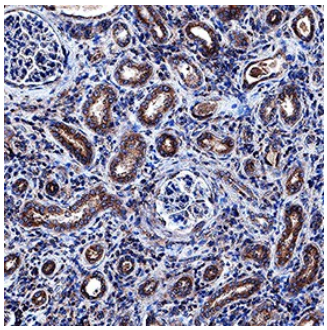
APPLICATIONS

Please Note: *Optimal dilutions should be determined by each laboratory for each application. General Protocols are available in the Technical Information section on our website.*

	Recommended Concentration	Sample
Western Blot	0.1 µg/mL	Recombinant Human sFRP-1 (Histidine-tagged) (Catalog # 1384-SF)
Immunocytochemistry	5-15 µg/mL	See Below
Immunohistochemistry	1-15 µg/mL	See Below

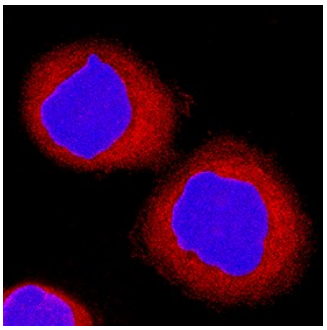
DATA

Immunohistochemistry



sFRP-1 in Human Kidney. sFRP-1 was detected in immersion fixed paraffin-embedded sections of human kidney using Goat Anti-Human sFRP-1 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF1384) at 1 µg/mL overnight at 4 °C. Tissue was stained using the Anti-Goat HRP-DAB Cell & Tissue Staining Kit (brown; Catalog # CTS008) and counterstained with hematoxylin (blue). Specific staining was localized to epithelial cell cytoplasm in convoluted tubules. View our protocol for Chromogenic IHC Staining of Paraffin-embedded Tissue Sections.

Immunocytochemistry



sFRP-1 in MBA-MB-468 Human Cell Line. sFRP-1 was detected in immersion fixed MBA-MB-468 human breast cancer cell line using Goat Anti-Human sFRP-1 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF1384) at 15 µg/mL for 3 hours at room temperature. Cells were stained using the NorthernLights™ 557-conjugated Anti-Goat IgG Secondary Antibody (red; Catalog # NL001) and counterstained with DAPI (blue). Specific staining was localized to cytoplasm. View our protocol for Fluorescent ICC Staining of Cells on Coverslips.

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.2 mg/mL in sterile PBS.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C
Stability & Storage	**Use a manual defrost freezer and avoid repeated freeze-thaw cycles.** ● 12 months from date of receipt, -20 to -70 °C as supplied. ● 1 month, 2 to 8 °C under sterile conditions after reconstitution. ● 6 months, -20 to -70 °C under sterile conditions after reconstitution.

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BACKGROUND

Secreted Frizzled Related Proteins (sFRPs) are a family of secreted, soluble vertebrate glycoproteins which contain homology to the Wnt-binding domain of the Frizzled (Fz) family of transmembrane receptors. sFRPs are approximately 30-35 kDa in size and are comprised of 3 domains: a signal sequence; an N-terminal Fz cysteine-rich domain (CRD) with 10 conserved cysteines; and a C-terminal heparin-binding region with weak homology to Netrin. The Fz CRD mediates Wnt-binding and is present in all Fz and sFRP family members (1).

sFRP-1, also known as secreted apoptosis-related protein 2 (SARP-2), FRP and FrzA, is expressed in the embryonic kidney, eye, brain, teeth, salivary gland and small intestine, most often at sites of epithelial-mesenchyme interaction (5). Expression in the adult animal is strong in the eye, kidney, and heart and also prevalent in the brain and lung (2, 5). sFRP-1 was first characterized as a protein that enhances the sensitivity of cells to apoptotic stimuli (3) and as an antagonist of Wnt signaling in *Xenopus* embryos (4). It is also characterized as a tumor suppressor in breast (6) and cervical carcinomas (7). In contrast, sFRP-1 is expressed by the majority of malignant gliomas (8) and contributes to the development of uterine leiomyomas (9), suggesting that the role of sFRP-1 is dependent on cell context. sFRP-1 has diverse activities, from inducing angiogenesis (10) in a variety of *in vivo* models to helping regulate Wnt-4 signaling (with sFRP-2) in renal organogenesis (11). Mouse and human sFRP-1 proteins share 94% amino acid identity (1).

References:

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