Human sFRP-2 Antibody

Monoclonal Mouse IgG_{2B} Clone # 755644

Catalog Number: MAB6838

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human sFRP-2 in direct ELISAs and Western blots. In direct ELISAs, 100% cross-reactivity with recombinant mouse (rm) sFRP-2 is observed and no cross-reactivity with recombinant human (rh) sFRP-1 or rhsFRP-5 is observed. In Western blots, no cross-reactivity with rhsFRP-1, -4, -5, or rmsFRP-2 is observed. 100% cross-reactivity with rhsFRP-3 is observed under non-reducing conditions only.
Source	Monoclonal Mouse IgG_{2B} Clone # 755644
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	Mouse myeloma cell line NS0-derived recombinant human sFRP-2 Leu25-Cys295 Accession # Q96HF1
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.

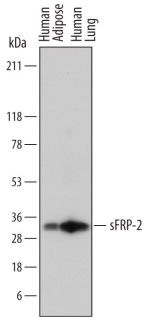
APPLICATIONS

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	1 µg/mL	See Below

DATA

Western Blot



Detection of Human sFRP-2 by Western Blot. Western blot shows lysates of human adipose tissue and human lung tissue. PVDF membrane was probed with 1 µg/mL of Mouse Anti-Human sFRP-2 Monoclonal Antibody (Catalog # MAB6838) followed by HRP-conjugated Anti-Mouse IgG Secondary Antibody (Catalog # HAF018). A specific band was detected for sFRP-2 at approximately 33 kDa (as indicated). This experiment was conducted under reducing conditions and using Immunoblot Buffer Group 1.

PREPARATION AND STORAGE

Reconstitution	Sterile PBS to a final concentration of 0.5 mg/mL.
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 Protein-2 (sFRP-2) belongs to a family of Wnt-binding proteins with homology to the ligand-binding domain of the Frizzled transmembrane Wnt receptors. The sFRP proteins are approximately 30-35 kDa in size and contain an N-terminal Frizzled-like domain with 10 conserved cysteines and a Netrin-like C-terminal domain (1, 2). Mature human sFRP-2, also known as SARP-1, SDF-5, and FRP-2, shares 99% aa sequence identity with mouse and rat sFRP-2 (3). sFRP-2 is widely expressed during embryogenesis and in the adult in tissues including the eye, heart, lung, colon, intestine, smooth muscle, pancreas, prostate, testis, kidney, brain, teeth and joints, craniofacial mesenchyme, and preadipocytes (3-6). Depending on the context, sFRP-2 can exert either positive or negative effects on Wnt signaling (7-9). It also inhibits BMP-induced effects (8, 10). sFRP-2 can be incorporated into the extracellular matrix through interactions with Fibronectin and Integrin α5β1 (11). sFRP-2 plays a variety of roles during tissue morphogenesis including inhibition of the planar cell polarity pathway and myoblast and osteoblast differentiation (8, 10, 12, 13). sFRP-2 is also expressed in multiple myeloma and glioma in which it promotes tumorigenicity (10, 14). At physiological concentrations sFRP-2 enhances BMP-1 mediated proteolysis of Pro-Collagen I, whereas at higher concentrations it inhibits BMP-1 activity (15, 16). This difference is significant considering that sFRP-2 is up-regulated in fibrotic areas of the heart following myocardial infarction (15, 16). Elevated levels of sFRP-2 then promote the recovery of cardiac function by reducing collagen deposition, remodeling, and calcification and by promoting the engraftment of mesenchymal stem cells into the heart (8, 15).

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