Human/Mouse sFRP-3 Antibody

Antigen Affinity-purified Polyclonal Goat IgG
Catalog Number: AF192

DESCRIPTION

Species Reactivity	Human/Mouse
Specificity	Detects human and mouse sFRP-3 in direct ELISAs and Western blots.
Source	Polyclonal Goat IgG
Purification	Antigen Affinity-purified
Immunogen	Mouse myeloma cell line NS0-derived recombinant human sFRP-3 (R&D Systems, Catalog # 192-SF) Ala33-Asn325 Accession # AAB51298
Formulation	Lyophilized from a 0.2 μm filtered solution in PBS with Trehalose.

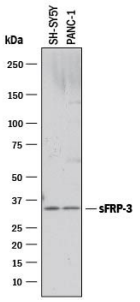
APPLICATIONS

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	0.1-1 µg/mL	See Below

DATA

Western Blot



Detection of Human sFRP-3 by Western Blot. Western blot shows lysates of SH-SY5Y human neuroblastoma cell line and PANC-1 human pancreatic carcinoma cell line. PVDF membrane was probed with 1 µg/mL of Goat Anti-Human/Mouse sFRP-3 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF192) followed by HRP-conjugated Anti-Goat IgG Secondary Antibody (Catalog # Catalog # HAF017). A specific band was detected for sFRP-3 at approximately 36 kDa (as indicated). This experiment was conducted under reducing conditions and using Immunoblot Buffer Group 1.

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.
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 3 (sFRP-3) was originally identified in bovine cartilage for its chondrogenic ability. Human, mouse, chick and *Xenopus* clones have also been isolated. SFRP-3 is often referred to as FRZB, other names include Fritz, Frzb1, and FRP-3. At the amino acid sequence level, sFRP-3 is highly conserved. The human protein shares 77% identity with *Xenopus*, 92% with mouse, and 94% with bovine proteins. Human sFRP-3 is strongly expressed in the developing appendicular skeleton, and cartilage of craniofacial bones. As determined by Northern blot of adult tissues, it is strongly detected in heart and placenta, as well as the brain, skeletal muscle, kidney and pancreas.

The N-terminal portion of the human protein shows 50% amino acid identity to the corresponding region of the *Drosophila* frizzled gene product, a receptor for Wg/Wnt signals. The similarity of sFRP-3 with frizzled proteins is restricted to the N-terminal cysteine-rich domain (CRD) that contains at least ten cysteine residues with highly conserved spacing between them. SFRP-3 was subsequently shown to be a soluble antagonist of Wnt signals. It lacks all transmembrane domains of frizzled proteins but retains the ability to bind Wnts. Ectopic expression of sFRP-3 mRNA has been shown to interfere with the induction of secondary axes in *Xenopus* embryos injected with Xwnt-8 mRNA.

References:

1. Hoang, *et al.* (1996) J. Biol. Chem. **271**:26131.
2. Leyns, *et al.* (1997) Cell **88**:747.
3. Wang, *et al.* (1997) Cell **88**:757.
4. Mayr, *et al.* (1997) Mech. Dev. **63**:109.
5. Rattner, *et al.* (1997) PNAS **94**:2859.

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