

DESCRIPTION

Species Reactivity	Human/Mouse
Specificity	Detects human and mouse sFRP-3 in ELISAs and Western blots.
Source	Monoclonal Mouse IgG ₁ Clone # 133931
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	Mouse myeloma cell line NS0-derived recombinant human sFRP-3 Ala33-Asn325 Accession # AAB51298
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 either lyophilized or 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	Recombinant Human sFRP-3 (Catalog # 192-SF) Recombinant Mouse sFRP-3 (Catalog # 592-FR) under non-reducing conditions only
Human/Mouse sFRP-3 Sandwich Immunoassay		Reagent
ELISA Capture	2-8 µg/mL	Human/Mouse sFRP-3 Antibody (Catalog # MAB1921)
ELISA Detection	0.5-2.0 µg/mL	Human/Mouse sFRP-3 Biotinylated Antibody (Catalog # BAM192)
Standard		Recombinant Human sFRP-3 (Catalog # 192-SF)

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.5 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. <ul style="list-style-type: none"> 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.

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 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.