

## SFRP4 Protein, Human, Recombinant (HEK293, His)

### General Information

Synonyms:	PYL;FRP-4;FRPHE;FRZB-2;sFRP-4
Protein Construction:	A DNA sequence encoding the human sFRP4 (NP_003005.2) (Met 1-Val 346) was expressed with a C-terminal polyhistidine tag.
Species:	Human
Expression Host:	HEK293 Cells
Accession:	Q6FHJ7
Molecular Weight:	39 kDa (predicted); 55-60 kDa (reducing condition, due to glycosylation)

### QC Testing

Biological Activity:	Measured by its ability to inhibit Wnt3a-induced alkaline phosphatase production by C3H10T 1/2 2A6 mouse embryonal fibroblast cells. The ED50 for this effect is typically 1-6 µg/mL in the presence of 20 ng/mL of Wnt3a.
Purity:	> 90% as determined by SDS-PAGE
Endotoxin:	< 1.0 EU/µg of the protein as determined by the LAL method.
Formulation:	Lyophilized from sterile PBS, pH 7.4. Please contact us for any concerns or special requirements. Normally 5% - 8% trehalose, mannitol and 0.01% Tween 80 are added as protectants before lyophilization. Please refer to the specific buffer information in the hardcopy of datasheet or the lot-specific COA.

### Preparation and Storage

Reconstitution:  
Please refer to the lot-specific COA.

#### Stability & Storage:

It is recommended to store recombinant proteins at -20°C to -80°C for future use. Lyophilized powders can be stably stored for over 12 months, while liquid products can be stored for 6-12 months at -80°C. For reconstituted protein solutions, the solution can be stored at -20°C to -80°C for at least 3 months. Please avoid multiple freeze-thaw cycles and store products in aliquots.

Actual storage temperature shall be subject to the COA.

#### Shipping:

In general, lyophilized powders are shipped with blue ice, while solutions are shipped with dry ice.

### Protein Background

SFRP family consists of five secreted glycoproteins in humans acting as extracellular signaling ligands. Each is approximately 3 amino acids in length and contains a cysteine-rich domain (CRD) that shares 3-5% sequence homology with the CRD of Frizzled (Fz) receptors, a putative signal sequence, and a conserved hydrophilic

carboxy-terminal domain. SFRPs act as soluble modulators of Wnt signaling, counteracting Wnt-induced effects at high concentrations and promoting them at lower concentrations. SFRPs are able to bind Wnt proteins and Fz receptors in the extracellular compartment. The interaction between SFRPs and Wnt proteins prevents the latter from binding the Fz receptors. The Wnt pathway plays a key role in embryonic development, cell differentiation and cell proliferation. SFRP4 is a member of the SFRP family that contains a cysteine-rich domain homologous to the putative Wnt-binding site of Frizzled proteins called FZ domain and a NTR domain. Mouse SFRP4 is highly expressed in the ovary, and is localized to granulosa cells of periovulatory follicles and corpora lutea. It plays a critical role in placental development and implantation, and is also an important factor in the development of the decidual fibrinoid zone, and in trophoblast apoptosis.

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