

SFRP1 Protein, Mouse, Recombinant (His)

General Information

Synonyms:	sFRP-1;Sfrp1;2210415K03Rik
Protein Construction:	A DNA sequence encoding the mouse SFRP1 (AAC53145.1) (Met1-Lys314) was expressed with a polyhistidine tag at the C-terminus.
Species:	Mouse
Expression Host:	CHO Cells
Accession:	Q8C4U3
Molecular Weight:	32.6 kDa (predicted)

QC Testing

Biological Activity:	Measured by its ability to inhibit Topflash reporter activity in HEK293T human embryonic kidney cells. The ED50 for this effect is typically 0.4-2 µg/mL in the presence of 300 ng/mL of Recombinant Mouse Wnt-3a.
Purity:	> 95% 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

Secreted frizzled-related protein 1, also known as sFRP1, is a 35 kDa prototypical member of the SFRP family. 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. The deregulation of this critical developmental pathway occurs in several human tumor entities. Mouse sFRP1 is highly expressed in kidney and embryonic heart, as well as in the eye, where it is principally localized to the ciliary body and the lens epithelium.

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