

## SRPK1 Protein, Human, Recombinant (His & GST)

### General Information

Synonyms:	SRSF protein kinase 1;SFRSK1;RP3-422H11.1
Protein Construction:	A DNA sequence encoding the human SRPK1 (AAH38292.1) (Glu 2-Ser 655) was fused with the N-terminal polyhistidine-tagged GST tag at the N-terminus. Predicted N terminal: Met
Species:	Human
Expression Host:	Baculovirus Insect Cells
Accession:	AAH38292.1
Molecular Weight:	102 kDa (predicted); 120 kDa (reducing conditions)

### QC Testing

Biological Activity:	No Kinase Activity
Purity:	> 80 % as determined by SDS-PAGE
Endotoxin:	< 1.0 EU/μg of the protein as determined by the LAL method.
Formulation:	Lyophilized from a solution filtered through a 0.22 μm filter, containing 20 mM Tris, 500 mM NaCl, 2 mM GSH, 10% gly, pH 7.4. Typically, a mixture containing 5% to 8% trehalose, mannitol, and 0.01% Tween 80 is incorporated as a protective agent before lyophilization.

### Preparation and Storage

**Reconstitution:**  
A Certificate of Analysis (CoA) containing reconstitution instructions is included with the products. Please refer to the CoA for detailed information.

**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

Serine / threonine-protein kinase SRPK1, also known as SFRS protein kinase 1, Serine/arginine-rich protein-specific kinase 1, SR-protein-specific kinase 1 and SRPK1, is a cytoplasm and nucleus protein that belongs to the protein kinase superfamily and CMGC Ser/Thr protein kinase family. Isoform 2 of SRPK1 is predominantly expressed in the testis but is also present at lower levels in heart, ovary, small intestine, liver, kidney, pancreas and skeletal muscle. Isoform 1 of SRPK1 is only seen in the testis, at lower levels than isoform 2. SRPK1

hyperphosphorylates RS domain-containing proteins such as SFRS1, SFRS2 and ZRSR2 on serine residues during metaphase but at lower levels during interphase. SRPK1 plays a central role in the regulatory network for splicing, controlling the intranuclear distribution of splicing factors in interphase cells and the reorganization of nuclear speckles during mitosis. SRPK1 locks onto SFRS1 to form a stable complex and processively phosphorylates the RS domain. SRPK1 appears to mediate HBV core protein phosphorylation which is a prerequisite for pregenomic RNA encapsidation into viral capsids.

### Reference

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