Data Sheet (Cat.No.TMPY-06810)

TargetMol

SFTPB Protein, Human, Recombinant (His)

General Information

Synonyms:	SFTP3;SMDP1;PSP-B;SFTB3;SP-B
Protein Construction:	A DNA sequence encoding the Human SFTPB (NP_000533.4) (Trp25-Ser381) was expressed with a polyhistidine tag at the C-terminus. Predicted N terminal: Trp 25
Species:	Human
Expression Host:	CHO Cells
Accession:	P07988
Molecular Weight:	41.04 kDa (predicted); 45 kDa (reducing conditions)

QC Testing

Biological Activity:	Activity testing is in progress. It is theoretically active, but we cannot guarantee it. If you require protein activity, we recommend choosing the eukaryotic expression version first.
Purity:	≥ 95% 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 PBS, 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

Pulmonary surfactant-associated protein B, also known as SFTPB and SP-B, contains one saposin A-type domain and three saposin B-type domains. SP-B is produced primarily by alveolar type II cells (AEC2) but also by nonciliated respiratory epithelial cells lining distal portions of the respiratory tract. Its secretion promotes alveolar homeostasis, stabilizing lipid layers and lowering surface tension at the air-liquid interface in the peripheral air spaces. Alveolar SP-B influences surfactant formation, effector cell functions, and innate host defense. Deficiency

is associated with respiratory distress syndrome (RDS), pulmonary surfactant metabolism dysfunction 1 (SMDP1), and other human lung diseases. Gene addition and editing therapies show promise by complementing SP-B expression in AEC2s, restoring the phenotypic defect in vitro and in vivo.

Reference

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