Recombinant PSPB protein (His tag)

Catalog Number	539722
Synonyms	SP-B; 18 kDa pulmonary-surfactant protein; 6 kDa protein; Pulmonary surfactant-associated proteolipid SPL(Phe)
Species	Human
Expression System	E. coli
Accession	P07988
Molecular Weight	Predictes a molecular mass of 9.79 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 10 kDa band.

Product Information

Sequence Region	206-279
Form	Lyophilized powder
Formulation	Lyophilized from sterile PBS, pH 7.4
Purity	>85%, by SDS-PAGE with Coomassie Brilliant Blue staining.
Endotoxin	Not tested.
Activity	Not tested.
Stability	Samples are stable for up to twelve months from date of receipt at -70℃
Protein Construction	DNA encoding 206-279 aa (P07988) were fused with 6His tag.

Storage & Handling

Reconstitution	Reconstitute at 0.25 μg/μl in sterile water for short-term storage. Reconstitution with 50% glycerol solution is recommended for longer term storage (see Stability and Storage for more details). If a different concentration is needed for your purposes please adjust the reconstitution volume as required (please note: the ion concentration of the final solution will vary according to the volume used). Note: Centrifuge vial before opening. When reconstituting, gently pipet and wash down the sides of the vial to ensure full recovery of the protein into solution.
Storage	Store it under sterile conditions at -20℃ to -80℃. It is recommended that the protein be aliquoted for optimal storage. Avoid repeated freeze-thaw cycles.
Shipping	In general, recombinant proteins are provided as lyophilized powder which are shipped at ambient temperature. Bulk packages of recombinant proteins are provided as frozen liquid. They are shipped out with blue ice unless customers require otherwise.

Description

Description	Recombinant Human Pulmonary Surfactant-Associated Protein B (SP-B) Fragment (residues 206-279) is a 74-amino acid protein fragment designed for structural and biochemical studies. This stable and soluble unit retains key features of the full-length SP-B protein, which is essential for alveolar stability by reducing surface tension at the air-liquid interface in the lungs. Pulmonary surfactant-associated protein B (SP-B) is a critical component of pulmonary surfactant, promoting alveolar stability by significantly lowering surface tension in the peripheral air spaces. Specifically, SP-B increases the collapse pressure of palmitic acid to nearly 70 millinewtons per meter, preventing alveolar collapse during respiration. The protein is naturally secreted into the extracellular space, where it functions at the surface film of the alveoli. This recombinant fragment (residues 206-279) was selected through computational analysis to provide a stable and soluble representation of SP-B, enabling detailed investigation of its structural and functional properties without the complexities of the full-length protein.