

## Product datasheet for **RC224088**

### SFTPb (NM\_198843) Human Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	SFTPb (NM_198843) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	SFTPb
Synonyms:	PSP-B; SFTB3; SFTP3; SMDP1; SP-B
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
ORF Nucleotide Sequence:	>RC224088 ORF sequence Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCC**CGATCGCC**

ATGGCTGAGTCACACCTGCTGCAGTGGCTGCTGCTGCTGCTGCCACGCTCTGTGGCCAGGCACTGCTG  
CCTGGACCACCTCATCCTTGGCTGTGCCAGGGCCCTGAGTTCTGGTCCAAAGCCTGGAGCAAGCATT  
GCAGTGCAGAGCCCTAGGGCATTGCCTACAGGAAGTCTGGGGACATGTGGGAGCCGATGACCTATGCCAA  
GAGTGTGAGGACATCGTCCACATCCTTAACAAGATGGCCAAGGAGGCCATTTCCAGGACACGATGAGGA  
AGTTCTGGAGCAGGAGTCAACGCTCCTCCCTTGAAGCTGCTCATGCCCAAGTCAACCAAGTGTGTA  
CGACTACTTCCCTGGTCATCGACTACTTCCAGAACGACTGACTCAAACGGCATCTGTATGCACCTG  
GGCCTGTGCAAAATCCCGGCAGCCAGAGCCAGAGCAGGAGCCAGGGATGTCAGACCCCTGCCAAACCTC  
TGCGGGACCCTCTGCCAGACCCTCTGCTGGACAAGCTCGTCTCCTGTGCTGCCCGGGGCCCTCCAGGC  
GAGGCCTGGGCCCTCACACACAGGATCTCTCCGAGCAGCAATCCCAATTCTCCTCCTCCTATTGCTGGCTC  
TGCAGGGCTCTGATCAAGCGGATCCAAGCCATGATCCCAAGGGTGCCTAGCTGTGGCAGTGGCCAGG  
TGTGCCCGTGGTACCTCTGGTGGCGGGCGCATCTGCCAGTGCCTGGCTGAGCGCTACTCCGTCATCCT  
GCTCGACACGCTGCTGGGCCGATGCTGCCACAGTGGTCTGCCGCTCGTCTCCGGTGTCTCCATGGAT  
GACAGCGCTGGCCAAAGTCCCGACAGGAGAATGGCTGCCGAGACTGAGTGCACCTCTGCATGT  
CCGTGACCACCCAGGCCGGGAACAGCAGCGAGCAGGCCATACCACAGGCAATGCTCCAGGCCTGTGTGG  
CTCCTGGCTGGACAGGAAAAGTCAAGCAATTTGTGGAGCAGCACAGCCCCAGCTGCTGACCCTGGTG  
CCCAGGGCTGGGATGCCACACCACTGCCAGGCCCTCGGGGTGTGGGACCATGTCCAGCCCTCTCC  
AGTGTATCCACAGCCCCGACCTT

**ACGGT**ACGGGGCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAATGATATCCTGGATT  
ACAAGGATGACGACGATAAGGTTTAA



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**Protein Sequence:** >RC224088 protein sequence  
Red=Cloning site Green=Tags(s)

MAESHLQWLLLLPTLCGPGTAAWTTSSLACAQGPEFWCQSLEQALQCRALGHCLQEIVGHVGGADDLCQ  
 ECEDIVHILNKMAKEAIFQDTMRKFLEQECNVLPKLLMPQCNOVLDYFPLVIDYFQNQTDNSNGICMHL  
 GLCKSRQPEPEQEPGMSDPLPKPLRDPLDPLLDKLVLPVLPALQARPGPHTQDLSEQQFPIPLPYCWL  
 CRALIKRIQAMIPKALAVAVAQCRVPLVAGGICQCLAERYSVILLDTLLGRMLPQLVCRLVLRCSMD  
 DSAGPRSPTGEWLPDSECHLCMSVTTQAGNSSEQAIPQAMLQACVGSWLDREKCKQFVEQHTPQLLTLV  
 PRGWAHTTCQALGVCVTMSPLQCIHSPDL

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

**Chromatograms:** [https://cdn.origene.com/chromatograms/mk6518\\_e05.zip](https://cdn.origene.com/chromatograms/mk6518_e05.zip)

**Restriction Sites:** SgfI-MluI

**Cloning Scheme:**



**ACCN:** NM\_198843

**ORF Size:** 1143 bp

**OTI Disclaimer:** The molecular sequence of this clone aligns with the gene accession number as a point of reference only. However, individual transcript sequences of the same gene can differ through naturally occurring variations (e.g. polymorphisms), each with its own valid existence. This clone is substantially in agreement with the reference, but a complete review of all prevailing variants is recommended prior to use. [More info](#)

**OTI Annotation:** This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.

**Components:** The ORF clone is ion-exchange column purified and shipped in a 2D barcoded Matrix tube containing 10ug of transfection-ready, dried plasmid DNA (reconstitute with 100 ul of water).

**Reconstitution Method:**

1. Centrifuge at 5,000xg for 5min.
2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.
3. Close the tube and incubate for 10 minutes at room temperature.
4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.
5. Store the suspended plasmid at -20°C. The DNA is stable for at least one year from date of shipping when stored at -20°C.

**RefSeq:** [NM\\_198843.3](#)

**RefSeq Size:** 2854 bp

**RefSeq ORF:** 1146 bp

**Locus ID:** 6439

**UniProt ID:** [P07988](#)

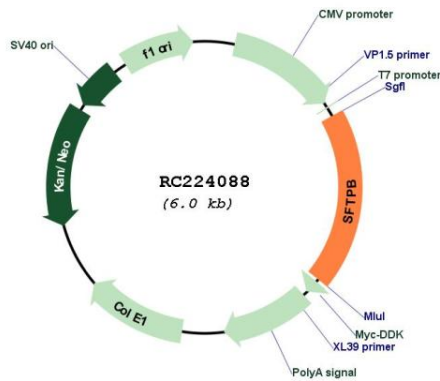
**Cytogenetics:** 2p11.2

**Protein Families:** Druggable Genome, Secreted Protein

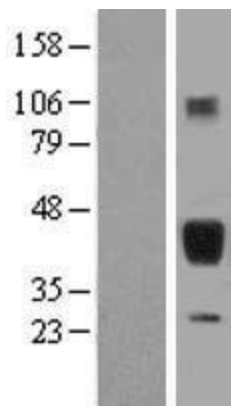
**MW:** 42.1 kDa

**Gene Summary:** This gene encodes the pulmonary-associated surfactant protein B (SPB), an amphipathic surfactant protein essential for lung function and homeostasis after birth. Pulmonary surfactant is a surface-active lipoprotein complex composed of 90% lipids and 10% proteins which include plasma proteins and apolipoproteins SPA, SPB, SPC and SPD. The surfactant is secreted by the alveolar cells of the lung and maintains the stability of pulmonary tissue by reducing the surface tension of fluids that coat the lung. The SPB enhances the rate of spreading and increases the stability of surfactant monolayers in vitro. Multiple mutations in this gene have been identified, which cause pulmonary surfactant metabolism dysfunction type 1, also called pulmonary alveolar proteinosis due to surfactant protein B deficiency, and are associated with fatal respiratory distress in the neonatal period. Alternatively spliced transcript variants encoding the same protein have been identified.[provided by RefSeq, Feb 2010]

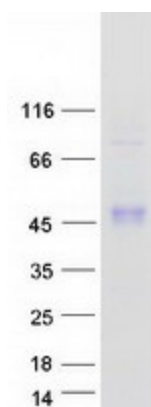
Product images:



Circular map for RC224088



Western blot validation of overexpression lysate (Cat# [LY404785]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC224088 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified SFTPBP protein (Cat# [TP324088]). The protein was produced from HEK293T cells transfected with SFTPBP cDNA clone (Cat# RC224088) using MegaTran 2.0 (Cat# [TT210002]).